

THE PORTUGUESE ELEMENTARY SCHOOL HYGIENE AT THE TURN OF THE 20TH CENTURY

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Abstract

This paper seeks to reflect on the new hygiene concerns that from the late 19th century, act in school. In particular, it will try to follow the didactic transposition of the legal norms to the elementary schools spatial territory from Barreiro, in a time period that extends until the twenties of the 20th century.

Key-words: hygiene, elementary school, school culture.

A HIGIENIZAÇÃO DA ESCOLA PRIMÁRIA PORTUGUESA NO AMANHECER DO SÉCULO 20

Resumo

O presente texto procura refletir sobre as preocupações higienizantes que, a partir dos finais do século 19, passaram a atuar no espaço escolar. De um modo mais específico, procurar-se-á acompanhar a transposição didática dos normativos legais ao território espacial das escolas primárias do Concelho do Barreiro, num período temporal que se estende até aos anos de 1920.

Palavras-chave: higiene, escola primária, cultura escolar.

LA HIGIENIZACIÓN DE LA ESCUELA PRIMARIA PORTUGUESA EN EL AMANECER DEL SIGLO 20

Resumen

El presente texto pretende reflejar sobre las nuevas preocupaciones higienizantes que, a partir de los finales del siglo 19, actúan en el espacio escolar. De un modo más específico, se buscará acompañar la transposición didáctica de los normativos legales al territorio espacial de las escuelas primarias del municipio de Barreiro, en un período de tiempo que se extiende hasta los años 1920.

Palabras-clave: higiene, escuela primaria, cultura escolar.

L'HYGIÈNE DANS L' ÉCOLE PRIMAIRE PORTUGAISE AU DÉBUT DU 20E SIÈCLE

Résumé

Ce text vise à réfléchir sur les nouvelles préoccupations d'hygiène qui, dès la fin du 19e siècle, ont commence à agir dans l'espace de l'école. Plus spécifiquement, nous voulons accompagner la transposition didactique des normes juridiques au territoire des écoles primaires du comté de Barreiro, dans une période de temps qui s'étend jusqu'aux années vingt du 20e siècle.

Mots-clé: hygiène, école primaire, culture scolaire.

By the mid 19th century, the social causes take the leading role of what concerns the civilizational fragility. The spotlight goes to culture, the knowledge, the behaviors and habits of the population. The physical weakness is clearly linked to a weak knowledge: the worker and the peasant's ignorance are related to the lack of sanitary conditions, which means the working population have to be polite, because their jobs and health depends on their good manners (Vigarello, 2001/1993). Ethical standards and knowledge go together for the transformation of the behaviors. The education is the new transportation of moderation of the excesses regardless of their nature in sight of social order. Education is converted into a privileged way for the spread of hygienist and sanitizing perspective (Gondra, 2003). The dissemination of new ways to live and act, based on hygiene principles designed as a science, was one of the goals of the education provided in schools, apart from at the same time, engage the whole school environment and their occupants to gain interest in medicine and hygiene. Therefore, education, civility and health worked as inseparable elements of the society moralization.

Pasteur's discoveries were important in the transformation of the relations between Society and the State, which led to aspect in life and its particular conditions to acquire a size and public interest. Preventing diseases has become a major issue and the hygiene problems have become social issues. The institution of vaccine is the visible expression of the new commitment state surveillance and protection of public hygiene: an example of this went by 1918, when a health subdelegated from Barreiro requested the intervention of the City Hall so the notices were posted warning the danger of smallpox, gave information of the vaccinated persons, ordered more vaccines and asked to apply, in a strictly way, the fines referred in the regulation of March 23, 1911, because that was the only way to avoid the spread of such a terrible disease. The dominance of the vaccine increased the faith that it was possible to extinguish the epidemics. As Georges Vigarello (2001) observed, the vaccine was the example of an attempt to counteract a disease of its appearance, protecting the body against any occurrence, turning it from the inside, which meant to press all individuals to withstand a physical attack to avoid the disease, but also, and above all, to prevent to spread to others, that is, to "affect each other flesh in the interest of all" (p .169).

The biggest threat to the progressive decay and degeneracy of the species stands out of the debates: "the insistence on a possible degeneracy is a way to stir up a great danger, to mobilize awareness, to invent solidarities: enhance the strenght of large collective messages in a society where the religion is fading away" (Ibid., p. 181). In fact, Jean Maisonneuve (1988) sets a curious association when considering that hygiene can be seen, in a certain way, as "une sécularisation des lustrations religieuses dont ele conserve souvent le caractère impératif et minutieux" (p. 30). We can also find a certain equality between hygiene and religious precepts in catholic ceremonies, as they begin, often with a sprinkling of holy water in order to purify the souls of the faithful and to free them, to them and the space they take, from the devil temptation. Therefore, with the

purpose of freeing from the illness, the body and the space where it moves, it must appeal to a dominating force of the individuals that dictates them from outside the rules and obligations. Maintenance of the body are converted, preventive cares emerge for growth and progress.

According to António Gomes Ferreira (2004), in the late 19 century, it started by the medicalization of the school environment and only later moved to the medicalization of the student. The main medical-pedagogic object of the hygienist speech were the infectious diseases and the construction of school buildings; subsequently shifted the focus of attention for the diseases produced by schoolwork and the conditions on which this was produced. When the State enacted mandatory education, it had to be responsible for the territorial conditions too where it was going take place. If, on one hand, the claim for a scholar hygiene was based on a indispensability to meet adequate conditions for the children development, secondly, it also appeared as a field of more medical intervention.

At the late 19 century, there is a tendency to put the pedagogical action under the medical reasons, where the learning process is now based on the study of the functioning of the human organism. In earlier years, the discursive intervention was focused on the child physical growth, however, in the 19th century, it extends to spaces and educational dimensions previously underestimated. The medical speech didn't stop at the problematic sanitation conditions in schools but it extended to the conditions and learning processes, providing guidance on the distribution of time, teaching methods, the type and sequences of school activities. In the late 19th century and early 20th century, the child development in a school context, becomes a target of analysis at medical-pedagogical field, aimed to an organized school according to a scientific pedagogy.

The medical speech of that period emphasized the unhealthy character of the school at a time when the social value of education was rising, in order to try that the school system expansion did not misrepresent the student's health and also to legitimize the medical intervention in the pedagogical field, either on individuals either on school organization and processes to follow in education (Ferreira, 2004). Therefore, the strategies of the government seek to validate the regulation of normality, conduct and subjectivities relying on science.

Carlota Boto (2012) launched a study based on inspection reports of 1867 and the results of its analysis, in terms of hygienic situation, the total sample was referring to 393 schools, pointed to the existence of 62,7% of schools in conditions considered satisfactory, 32,9% unsatisfactory and only 4,4% were characterized unhealthy. Regarding the cleaning issues, in 369 schools, the most of them were in the satisfactory parameter, corresponding to 68% and only 3,3% showed no cleaning. In respect of ventilation, the results indicated that 61,5% of schools would have sufficient ventilation, 23,9% poor and 14,6% uncomfortable in a total of 390 schools. The author's work draws the attention to the difficulty of generalizing by the average, due to the profound regional diversity, and points out that the informations suggest that the schools located in large urban centers were privileged over the already existing in the villages or in farther towns.

The lack of sanitary conditions in schools is clearly assumed early in the lobby of December 29, 1875 along the following lines: “consisting by the reports of the inspectors of several schools and the information of some prefects the awful hygienic and teaching conditions who find themselves many elementary schools”. To deal with the diagnosed problem, politicians act to legislate, but few have served in practice, because, as Cândido de Figueiredo (1876) stated, “so that men route the society that it is intended by nature, laws and decrees aren’t enough” (p. 11).

The school hygiene issues made their appearance in the last decades of the 19th century. On march 15, 1884, in *Revista Escolar Portuguesa* (ano 1, n. 2), it was stated that “only modern times has been studied the application of hygiene to school, especially to elementary school.” (p. 17) and, since the choice of the school building until the methodology used, the teacher would have to meet all the circumstances that could help the child’s development who was entrusted to his care. The issue of State responsibility for developing and maintaining the physical health of the children, which required to attend school during a part of childhood, was reflected in the decree n. 2, december 24, 1901:

Has the State inspired confidence to parents that seek in schools, as a educational sanctuary of their children, the maximum guarantee and safeguard of those children’s health in the most critical period and contingent of existence? Answer us the sickly, and the increasing atrophy of race that is seen in the population that attends our public schools, future prey of that scourge - tuberculosis - which by all means we try to fight and dominate in their march cruelly invasive. (*Boletim da Direção Geral de Instrução Publica. Anno de 1902, 1903, p. 2*)

The critical assessments continued: “neither it is understood that a law such as the mandatory schooling, can sacrifice individual freedom on behalf of collective interests, imposing agglomeration of children in places that their physical etiolation are condemn” (Ibid., p. 5). A detailed study on the subject became inevitable:

Wheter consider the conditions concerning the ground, the school exposure, the light it receives, its furniture, or, more particularly, if they consider the children that use it, their work, the various positions, the exercises, breaks, diseases, etc., everything requires a study and demands a special regulation. (Ibid., p. 3)

It was recognized, at last, the urgent need to adapt hygienic requirements appropriated to school environments.

Following this line, the decree n. 4, september 19, 1902, which regulates the decree n. 8, of december 24, 1901 - elementary school reform, estipulated that one of the competences of the sanitary inspector would be the inspection of the own school, at the begining of each scholar year, of every children who entered for the first time, while the others students would be subject of a closer superficial and lighter inspection

If a student contracted a dermatologic problem, could only return to school “after completing the treatment and with a bandage, the remaining students ought to be advised

not to wear any piece of clothes that belonged to the infected” (decreto n. 4, 19 set., 1902, art. 374, 3.º).

If the health inspector acknowledged symptoms of transmissible disease in any student, he would be returned to his family immediately, together with a report that indicated the precautions to prevent possible contagions, informing the family that the student could not be received in school unless he had taken “one or more baths ” and disinfected the entire clothing, books, notebooks and other personal items; “the student’s classroom will be immediately disinfected during the school work suspension, by public desinfection”¹ (Ibid., 4.º). The period to attend the school again in case of hepatic transmissible disease varied between “pox, scarlet fever and diphtheria, 40 days; erysipelas, whooping cough and typhoid, 30days after the healing; chickenpox, measles and goitre 16days” (Ibid., 6.º). The restriction of school entry, detected such infections, extended to all the other students that interacted with the infected one and not just the health inspector as well as the teacher would have the authority to make this prohibition.

In the decree of april 5, 1910, designed to clarify the criteria that should be followed by school officials in teachers’ service qualification of elementary schools, there was section entitled *Higiene escolar*, that appealed to the sub-inspector to assess how this was put into practice by the teacher. Despite recognizing that “the teacher does not have the means to modify the defective conditions under the hygiene aspect of a school building, but can keep the school house and its dependencies always in order”, the teacher could also take care of “accurate neatness”, “airing the classroom when students aren’t there” and “watch for the preservation and good conditions of the building and furniture” (Ministério dos Negócios do Reino, portaria de 5 de abril de 1910).

At this point, it is believed that the power granted to teachers at that time was already taken as a habit inherent to their duties, so it is in this that justifies the letter to the City Council of Barreiro, in july 1901, by the male official teacher of the village, requesting a barrel with disinfectants to school at his charge ‘, july 31., 1901). The aspects of school hygiene to be observed when evaluating teacher performance, not only were the spaces, since, “should not deserve the minor sub-inspector attention the cleaning of the students” (Ministério dos Negócios do Reino, Portaria de 5 de abril, de 1910). It was up to the teacher to encourage students in personal hygiene habits “the teacher who neglects to create these habits of hygiene misses one of his more imperative duties” (Ibid.). It was recognized in advance that students “are ordinarily poor”, but this shouldn’t be excuse to not appear in school “well washed, clean teeth and hair, and nails trimmed and neat” (Ibid.).

In the 1st Pedagogical Congress of Elementary Education and Popular, held in April 1908 and promoted by the National League of Instruction, is made a devoted critique of the legislation concerning hygiene in the program of primary education: “in the first grade, not the slightest reference is made to hygiene” (Nazareth, 1909, p. 131), but in contrast,

¹ At the end of 1913 would be met its request to the City Council by a health subdelegate from Barreiro for disinfected the male school of Lavradio, “where the husband of the respective teacher was found sick” (AMB, 24 dez., 1913).

this program required in respect of poultry, the students had knowledge of “feeding and fattening, major diseases that attack them, means to avoid it and remedies with which they must fight, not forgetting the care that demands raising silkworms and bees” (Ibid.), whereby, “according to the legislator’s discretion of 1902 is much more important for the prosperity and enhancement of the nation, the health and the fattening of chickens and turkeys, the welfare of silkworm and bees than the integral conservation and toughening of its inhabitants” (Ibid.).

On the other hand, “to counteract this penury of hygiene education in the first grade of elementary education, appears to us, magnificently, the program for 2nd degree to be impose to students the extensive knowledge of various branches of hygiene” (Ibid.); the problem here was due to the lack of training from teachers to minister such teachings, which was accompanied by the fact that it was seen as curious of the program approved by the decree of october 18, 1902, to be used in school of primary instruction of the 2nd degree, to cover subjects that were not included in the regular school program.

In this Pedagogical Congress were also presented the ways that should be processed the hygiene education in regular schools, in primary schools for adults and in primary schools for children and is on the last ones that we’ll dwell on.

Hygiene should be taught to children, since their first step in school until they leave, by the use, whenever possible, the example, reducing the theoretical teachings just the indispensable. The prescribed methodology could be summarized as follows:

Thus, for instance, the lack of cleanliness of a students hands, an object caught from the floor, that saw putting in the mouth, are pretexts to make the disciples understand how dangerous it is for health eating whatever, without washing previously their hands, and, by association, it is easy to show them that they should not chew fruit without peeling or washing; and given in lighter terms , the reason of the rule, exposed the reasons why one should proceed in a certain way and not another, the teacher will make sure it is well done, in practice, suggesting cases that require their application. Thus it will be possible, not only record indelibly all hygiene precepts in children’s minds, but also, which is of great importance, erecting their execution in habits that are necessities. (Ibid., p. 136)

The teacher, always guided by these standards, should not miss the opportunity to minister to their studends very elementary concepts about the benefits and procedures of cleaning and about body and habitation neatness, on the means to defend against infectious diseases, food and clothes, in addition to teach some basics of first aid in case of accident. In any of these points, what the teacher taught should be adapted to the local environment and social, “looking preferably as long as possible, better to transform than destroy the traditional customs and reserving the formal condemnation only for harmful errors that have trendy in the region” (Nazareth, 1909, p. 137).

The hygiene advices imposed a new battle against negligences and rusticity, because a new danger was lurking just around the corner and it was important communicate the hygiene standards throughout the school. In this sense, a few years later, in the article *Education and hygiene*, published on the front page of a newspaper

from Barreiro, transmitted the message that the only way to educate people was through children:

Without education there can be no hygiene. And without hygiene there's no vitality! We need therefore to seek how to educate our people, especially our *tiny* nation, the adult people of the future, because educating today's adult is an impossible task, at least very difficult. (*Éco do Barreiro*, 15 mar., 1925)

Despite the understanding that good hygiene habits should be instilled in children, there was the problem that just a few teachers were aware of the issue, on the other hand, also foresaw that the results were not positive due to the examples that those found in home.

If in our primary schools, in general, only teaches the ABC, except for one or another teacher, who explains to his students how to conduct themselves before family and strangers, being these same exceptional explanations unhelpful results in presence of habits and customs of the student opposed, in most cases, there within the family? (Ibid.)

The solution proposed passed through the establishment of education schools in each of the diverse communities of the city: should be carried out periodically, few educational conferences, a community room available for each purpose, children's parties would be forced to watch, and the entry would be allowed to all other children and even adults who wished. With these initiatives, and with what was taught in schools, hoped that the situation they lived was changed.

The problem from lack of hygiene in the village was an old problem because already in August 23, 1917 such observation was made by a health deputy, "under poor hygienic conditions of the County, for lack of cleanliness" (AMB). In February 7, 1918, the sub-deputy of health returns to address to the City Hall asking to remove several outbreaks of infection existing at the beach that were harming public health and also to order the police and Republican Guard, to prevent the dump, to the streets of the village and the beach of trash that should be collected in the cleaning wagons. In the summer of that year, one of the members informed "those who are in a poor state of cleanliness, almost every street of the street, which is dangerous to public health, especially at this time of the year in which abounds already attacked people of smallpox", and also remembered the desirability of publication of a notice advising residents "not to lie down on the street any liquid or wastes that may contribute to the development of diseases" (AMB).

The school was seen as an ideal place for educating citizens, but was also regarded by the medical discourse as a place that stole the physical and psychological health of students, given the conditions in which they did their education (Ferreira 2003). The medical discourse, by emphasizing the unhealthy school character, had in view to prevent the generalization of education was made at any price, by denouncing the conditions which the students were subjected, in order to compel public authorities at modifying what harmed. Let's look at some examples.

In 1912, at the 3rd Pedagogical Congress Nicholas Bettencourt presented a thesis on the prevention of contagious diseases, which pointed the health conditions of the local, situation of the school building, cubage, exposure, lighting, temperature, ventilation, furniture, as well as washrooms and toilets, as may have indirect action and influence, to a greater or lesser extent, the spread of contagious diseases.

Said that the Portuguese laws and regulations were in accordance with what is legislated in other countries too, “just between us those precepts are almost entirely empty words - because there are no resources nor staff” (Bettencourt, 1912, p. 138). Criticized the fact that all functions of the sanitary inspection to be entrusted to health subdelegates, instead of creating a group of private health officials intended only to that order, sufficiently paid to be able to dispense the clinic.

The health subdelegates were municipal optional whom indulged all functions of hygiene and sanitary review in the city, in exchange for a meager salary that went from 50-150 thousand réis annually: “at this enormous complication of services that the school inspection constitutes only a tiny fraction is delivered to a doctor who has to be, first of all and above all, a clinician, because only the clinic can ensure him the proceeds” (Ibid., p. 138-139). Was creating some critical observations about what was legislated about contagious diseases and the impediments to school attendance from those arising, due to its failure in reality. Pointed out, however, one positive aspect of primary legislation: the compulsory teaching of school hygiene in normal schools because, “in fact the teacher can and should be an excellent helper of the school health inspector as long as a careful teaching and well oriented gives him the essential knowledge of this branch of hygiene” (Ibid., p. 141).

At the same meeting, another rappouter, Fernando Artur Rocha, presented a communication entitled *Diseases contracted in school and their remedies*, which showed that the diseases resulted from a poor blood oxygenation from the student, due not only to the “abominable conditions of installation” but also the “vicious school attitudes” because caused or contributed to the chest asymmetries, “true deformations hindering the regular lung function, shooting down, compromising breathing function, by nutritive excellence” (Rocha, 1912, p. 133).

The position, ventilation, lighting and school heating were responsible for a portion of health problems², but they were also guilty, in this area, the teachers who shouldn't

² According to the School General Health Inspection, school doctors found that there was an increase in the percentage of weak children suffering from lung-ganglion specific in primary schools of general education officials in Lisbon, the previous two years to 1920 (Decree n. 2.433 of september 14, 1920, *Diário do Governo*, series I, n. 182, september 15, 1920). To deal with this problem, and given that “outdoor schools, organized in harmony with the fundamental principles of hygiene, effectively solve part of the problem” (Ibid.), the School General Health Inspection had the task of promoting the installation and operation of one or more outdoor schools in the city of Lisbon, for children recruited by school doctors among those attending primary schools of general education. In 1923 an enclosure from Palácio das Necessidades is given in to School General Health Inspection which was unimproved, along with the outbuilding (rural and urban dependencies), for the installation of an outdoor school. This enclosure, and its outbuildings, was at a “poor and crowded Lisbon neighborhood” (decree n. 8.832, may 17, 1923, *Diário do Governo*, series I, n. 103, may 17, 1923) with “exceptional conditions of afferostation, gardening and air purity”, by which “lends itself to combat the harmful action that the big means have on the children.”

consent another position in students different from “right trunk in natural extension” (Ibid.). Their observations were aimed to high schools, but that does not mean that no one can make the extension of their ideas for the primary education, where the classrooms physical installation were still much worse and where it began the appearance of defects in posture. Other aspects were for him also a focus of attention in the thesis presented: digestion and its problems: infections of the digestive system might have started from the “usual ingrained in all students of putting everything in their mouths and gnaw: pencils, paper, books, nails, etc.” and “ingestion, one per cup of water mainly contained in canisters poorly maintained and often of doubtful origins” (Ibid., p. 134), vision, because in his opinion this is one of the sense organs that easily changes in schools, and, finally, the issue of school furniture, which was said to have a large influence on the production of some ills of childhood and adolescence.

Pedro José Ferreira, in his speech on the occasion of that same 3rd Pedagogical Congress highlighted the poor conditions of schools: “in general in our schools there is no air, sunshine, water, there is no room for the physical exercises and exposure to resources, are the denial of hygiene; children lose the little health that they have” so that “we will not have robust citizens, men of action” and “a school without a small garden, a proper gym, without a yard for games and breaks, will turn for the unhappy children, instead of a school a deforming mean” (Ferreira, 1913, p. 161).

But it was not only in the educational conferences that such issues were raised. In 1913, Armando Pereira, in his dissertation entitled *A higiene nas escolas primárias do Porto*, presented to the Medicine University of Porto, defended that the cleaning and maintenance of the school, either on the outside or inside of the building, was indeed important,

not only for the interest of hygiene, but also as a lesson for the children that attend it, for so they will get used to live in an atmosphere of cleanliness at the same time that it provokes a huge incitement on his part useful so that in their houses force for their example, parents, sometimes of an unspeakable rudeness, to respect the more basic principles of elementary hygiene. (Pereira, 1913, p. 18)

He attributed the myopia, which is seen in many adults, a faulty distribution of light in the classrooms they attended as children. The importance of light was not confined, only to visual function, but also should be understood as a powerful antiseptic. To this author, natural lighting was preferred to left-sided because, this way, at the time when are writing, the shadow of the arm and pen or pencil does not protrude over the paper; when the light enters from the right makes writing more difficult and requires a greater effort of attention, while damages visual organs. Regarding the issue of classroom ventilation, Armando Pereira pointed to the need to keep the air pure always, as far as possible, in order to avoid adverse reactions of a vitiated atmosphere that besides being harmful still was more for the kids, because they had more favorable conditions for receptivity and in greater number of diseases, “who, like us, came in many schools always in fully conditions, no

more forget this unpleasant smell that in classrooms develops, when not sufficiently ventilated” (Pereira, 1913, p. 32).

For proper ventilation of the classroom advocated the existence of moving flags in the upper windows and doors, and on the opposite side of those, would open up holes near the floor of the rooms, which could close whenever they wanted and through which would regulate the entry of air. During break of school work, doors and windows should be opened widely; however, states that in some schools of Porto it did not happen, because schools lacked playgrounds where children could be during breaks, being forced to play within their own classrooms, “saturating the air with pulmonary poisoning-exhalations products, and dust posing with their mirth” (Ibid., p. 33).

The airing of the past that favored the spread of perfume to mitigate odors is now replaced by the principle that the air must circulate. The accumulation of people in confined spaces occasioned by the lack of elasticity of the air surrounding due to the proximity and excess of lungs, which was followed by the extra heat, humidity and provoked odors. The importance of air circulation in common spaces took special care for the health of everyone. This concept was so important that Agostinho de Campos (1922) wrote, ironically, “human settlements favor the spread of epidemic, and therefore do not open schools. Before an alive fool, than a dead wiseman” (p. 168).

Another aspect worthy of attention concerns the issue of dressing rooms, at the entrance of the schools, where students placed their hats, umbrellas, baskets with snacks and their coats. Although recommended at the time, Armando Pereira (1913) noted its near absence, because children took their belongings to their desks or hanged them on, indiscriminately, in some strewn hangers along the hallway or in their own classrooms, which caused some promiscuity, because “a student whose scalp is prey to any morbid process essentially contagious, or whose hair that contains parasites can transmit the disease to a healthy buddy or populate his clean head, since both use indistinctly the same hanger” (Ibid., p. 39).

Concerning the urinals and latrines, advocated placing one at the end of the building and in direct communication with the playground, to prevent the spread of undesired exhalations and the entry of children in the school building in break times when they wanted to use them. The latrines should have a porcelain bowl, close to an irregular cone frustum, elliptical base, whose dimensions were according to the height of the children, whereby within the same school should be latrines of many sizes; relatively to the already existing, “the old latrines in casket, with circular hole, without basin, or this one without siphon, or with a rudiment valve, which preceded the appearance of that, which is so common in Porto, must be completely replaced” (Pereira, 1913, p. 45).

Well, the siphon, is a particular device that triumphs in the new instrumentalization of sanitary space, being the symbol of hydraulic practices at the late 19th century: “the siphon illustrates the two goals of interior arrangements: on one hand, the reinforcement of domestic wastes, the isolation of each water point, on the other” (Vigarello, 2001, p. 217). With a curved contour shape of elbow, the siphon is placed under the bottom of vats, tubs

and dumping sinks, holding the possibility of communication with dangerous substances; so their sanitary efficiency lies in the fact that it preserve the body isolating it from the materials.

In the early 20th century, the district of Barreiro decides to apply a new sewage system in their primary schools to replace the obsolete system of buckets. The City Council, with the goal of equipping schools of primary education “of a major improvement for the good hygiene of the students of these schools”, decided to demolish the existing toilets where the wastes were deposited in buckets because at the end of school work these wastes were placed in cleaning carts, and ordered to make a new design for toilets where the wastes were dumped directly into pits of Mouras system (Câmara Municipal do Barreiro april, 30, 1902). That system represented a great advance over the previous one, allowing the resolution of two problems: “first liquefaction of wastes, thus facilitating their plumbing and driving to any point; secondly, making disappear gases completely, which in other systems, were developed during the decomposition of faecal matter” (Ibid.)

For the sake of security, two pits were designed adjoining: one to receive directly faecal matter and the other with half of the volume, to receive the urines and purify the waters of the first pit. The new toilets were designed over these pits, five toilets and one urinal with four compartments for the male school and six toilets for girl school. To conclude the technical description of the project, the conductor of public works which signs it informs that “the dump of the second pit is made directly to the river in stoneware pipe” (Ibid.). This issue of sewer system in hidden branches in the soil brings us to the inner working of our own body, specifically the blood network, “the idea of the sewage collector invisible and radiant ramifications concludes the mechanical and organic representation of urban feed, the inner work guaranteed by the flows” (Vigarello, 2001, p. 201).

What was happening in the others schools of the county apart from schools of Barreiro was completely different. Here we are only concerning the schools from Lavradio because the remaining were installed in rented buildings, unaware of the sanitary system and how its dumping would be done. Requests to dump the pits almost always lined a matter of urgency and it's easy to imagine why: for example, in early 1919, the teacher from Lavradio sent a letter to the City Hall asking for the dump urgently of the pit of that school, “for not doing use of the lavatories” (AMB, 29 jan., 1919). Local government recognized sometimes the inconveniences that the lack of cleanliness of schools occasioned to public health, as noted by the concern shown in the early days of mandate of a town executive in october 1923:

The president reported that being the cleaning of public school compulsory charge of this City Hall, is usually included in the School Board's budget a certain amount for that service, by being insufficient leads to a failure in cleaning the school with serious danger of hundred of children attending the schools. The City Hall has to overcome this inconvenient, in the name of hygiene and public health, so recalls that this City Hall take the charge of making the school cleanings. (AMB, october 3, 1923)

Pay attention to what was happening on the facilities of Asilo D. Pedro V, which has always worked, just like day-school, located in the town center. Regarding the facilities, it was found that was given very little attention to them over the years, given the small number of records which they make reference: was found only, in April 1862, the registration expense of \$960 réis with “latrines cleaning” (APDV Conta das Despesas 1862-1864) and, in another book, mentioned the word “private” (APDV, Livro das despesas 1874-1897). However, it must be emphasized that at the time, the existence of a bathroom would be an exception in portuguese houses, and even for the overwhelming majority of architects, the compartment of the toilets in the house would be, in the first quarter of the 20th century, a division yet superfluous (Cabido, 1994). With the advance of the 20th century, that area begins to be the object of care from the leaders of the Asylum who feel the need to make significant improvements:

For being anti-hygienic the stall intended to be the children toilet whose arrangement forced them to a complete promiscuity, provided in times this Department to end such inconvenient, which constituted an absolute shame, resolution that earlier was satisfied with the constuction of a wider stall and in conditions that, without those inconvenients, presents an aspect quite good. (APDV, *Livro de actas da direção 1921 a 1926*, n. II, 2 Junho, 1924)

Concerning the cleaning of the building, and taking as a reference the *Regulamento Interno para os Alunos Externos do Asylo D. Pedro V do Campo Grande* of 1862, we see that these hygiene issues were not neglected: “Agreeing that [...] is preserved most cleaning, therefore there will be the care to clean the latrines during the day as often as may be deemed necessary” (p. 11), “on saturdays, after dinner, the kids return to their homes in order to take place the washing of the building” (Ibid.), being chosen from among the older students, four per week and per shift, to do the house service along with the maid. Given these norms that prevailed in a similar building and without more information, it is inferred that the cleaning of the building Barreiro Asylum was also in charge of the servant but on Saturdays would be helped by older students: “just 21 children were present for being the day before the party, were doing counts and cleaning the house for the day because it was Saturday the ceaning day” (APDV, *Registo das Senhoras Directoras e Inspectoras*, 9 set. 1882). During the week, was up to the maid to have the cleanings done by 8h30 (Ibid., 12 jan., 1883). In monthly expenses between 1874 and 1897, there is always the record of funds spent on “clothes washing” and “house and yard cleaning” (APDV, *Livro das despesas 1874-1897*); such expenses, however, should be a constant over the times in that instituiton, because there are records in 1924 certifying that the cleaning of asylum and the clothes continued to be in charge of a servant (APDV, n. II, 2 jun., 1924).

In matters of personal hygiene, specifically students capillary hygiene, it was found that using hair cut was a requirement of the institution, most likely as a therapeutic and preventive pediculosis problems, beyond that “la coupe des cheveux correspondait non seulement à un sacrifice, mais à une reddition: c’était la renonciation - volontaire ou imposée - aux vertus, aux prérogatives, finalement à sa propre personnalité” (Chevaliern; Gheerbrant, 1973, p. 366). However, this practice would not be well accepted by all, because in the *Livro de matrículas 1885-1955* there are several output registers of

students from the Asylum, all before 1891: “for not wanting to cut hair”, “whose parents who didn’t want to cut their hairs ” and “because the mother thought she was already grown up to have her hair cut !!”. This attitude of hair cut rejection, either by students or parents, can not be dissociated the meaning that that part of the body takes, because “la coupe et la disposition de la chevelure ont toujours été un élément déterminant non seulement de la personnalité, mais aussi d’une fonction sociale ou spirituelle, individuelle ou collective” (Ibid., p. 367).

The hair cut normative would last in time, once in June 30, 1925, there is a settlement expense of 46\$05 of “haircuts of asylum students” and on december 10 of that year, were spent 34\$50 for “haircut to students” (APDV, f. 55 e f. 61). To sum it up, we can say that the Asylum always assumed as a space to defend from disease, through simple hygiene requirements, appropriate to the times that went through, that applied to people and the building. In a short way, it may be said that water, soap and scissors were the war weapons.

If, in each school, monitoring the hygiene requirements was incumbent upon the teacher, at the municipal level such a task would be attached to the school doctor, as previously referenced, and when there was not, to a health subdelegate . Thus, in order to comply with a legislative measure, in early September 1919 at a meeting of the Executive Committee of the City Council would take aware of a official document from General School Health Inspection, dated august 28 of that year asking to be opened documental call to a school doctor, among the local doctors (AMB, 10 set., 1919).

The result of that call should then be sent to that entity, so that it could proceed as determined by the regulations towards the officer selected by the City Council. This decided that should inform the General School Health Inspection attending it that sanitary inspection of schools was in charge of the local health subdelegate, however, does not seems like to have done right away, because in the record of december 31, 1919, there’s a registration requesting a response to that official document, having been settled to indicate the doctor dr. Francisco Dias Nogueira to that place, “for being the doctor of the municipal party presented the proofs in its call” (AMB). If this doctor performed the new tasks that the legislation imposed on him for the taking position, is not known, but it appears that, like so many other things legislated, this measure was only one more to stay only on paper.

Health issues, and more specifically the hygiene areas, also passed by the school furniture. The space that each student had in the classroom ended up being limited to the place where each one were seating on, reducing them, the possibility of movement, so that, from the existing furniture in schools for students, emerged postures they acquired from the use of it. Adolfo Lima even criticizes the lack of mobility of students within the classroom, in a very interesting similarity with Foucault’s vision of the school:

The permanence of the child during one, two and four hours each day, seated on a bench, not being allowed to talk, laugh, breaks his natural and necessary expansion of its energy. Such system creates him indolent habits, makes him lazy and clears his mind, throwing him in a morbid apathy. The school becomes, by stultifying silence, in a convent; by the degraded discipline, in a barracks; by the lack of freedom, in a prison! It’s the fear that reigns. It’s dismal. It is a place of torture that the child natural and justifiably hates. (Lima, 1914, p. 68)

Beyond the pupil's position, also his place in the classroom was an aspect that was attributed little importance and it was decisive, most of the times, in school failure: "in school they're arranged to random places, without caring to know if children see, hear, or whether they can be heard; the result is the child tires out with the effort that made in a faulty way, followed by disinterest" (Ferrão, 1913, p. 81). An article published in *Revista de Educação e Ensino* of 1889 warned about these dangers: "in the educational transmission transformed to the impulse of modern civilization is, as a consequence of major causes of error, individual pathological changes that can be group into two classes: - anatomical changes and functional changes" (Ferreira, 1889, p. 248). Regarding the anatomical changes explained that

the normal type specific of the current man suffers due to school adjustment, a turn quite remarkable and important in anthropological point of view that includes the individual, species and societies. The alteration of this type is the result of deformations to which the individual is subjected during school activity. These deformations are the results of vicious positions that take the student or make them take in daily exercise of intellectual development and scientific appreciation. (Ibid., p. 248)

The most common anatomical deformation resulting from the school activity were deviations of the spine: kyphosis "produced by time consuming attitudes, with the back bent, reading, writing or sewing, and due in part to the need created by myopia of leaning alot the torso closer with the eyes to the work in hand" (Ferreira, 1889, p. 249); lordosis, "incurved which is most common in women and as a school deformation has its etiology in the forced attitude which the students are obliged to keep themselves straight in seats without backs" (Ibid., p. 249); and scoliosis "is produced generally from 6 to 14 years and is more common in girls that boys, less accommodative to maintaining their positions and more ready to change them" (Ibid., p. 250). Thereby, the school was seen as a space of degenrration that questioned the health of future generations: "and what fatality to a country and society if the school is like a mine that deteriorates the formation of an important part of their members, in a inglorious and unproductive labor" (Ibid., p. 253).

The biggest problem was the fact that students have to adapt to a way of life different from normal and be subjected to unnatural attitudes for long periods: "submitted the person in school to vicious positions more or less preserved, contained or contradicted in his youth impulses, loses that vivacity characteristic and necessary of children, breaks the functional equilibrium" (Ferreira, 1889, p. 253). Apart from this problem, there was another: "myopia is the sad prerogative of those who study, as all who work with the vision accommodated for too close" (Ibid., p. 255).

To minimize all these health problems, several measures were taken: to reduce the deformations of spine, were produced "improvements in schools, both in furniture, and in the regulation of hours of study and introduction of gymnastic and recreations necessary and useful" (Ibid., p. 256), but for myopia, one of the anatomical disturbances considered by some "the school disease by excellence" (Ibid., p. 255), had not yet found a solution,

because the programs required the students to an excess of efforts, not only in school but also at home, which often made under poor conditions of light. This way, the children, by appropriating the compressed space that was given to them and the extended time that remained there, ended up getting used to certain positions, in other words, the entrapment in enclosed spaces would eventually end in a harmful act on the body.

Final notes

From the late 19th century, the medical rationality moves covering the intimate space of home and family, and how school has become a crucial phenomenon in the construction of developed countries and the assertion of western modernity, the school also found itself center of attention from doctors who advocated a preventive strategy and prophylactic. However, the medical-pedagogical speech served mainly to legitimize and provide a scientific rationale for organizing principles imposed for administrative reasons, since their intervention force in pedagogical practices was minimal.

The school and the students have become the object of particular attention by medicine and hygienists movements. The conditions of safety and hygiene of everyday life invade the school: calls up an own architecture and appropriated building materials, which combine the functionality and specific infrastructure, volume and ventilation according to standardized patterns as well as the introduction of specific furniture unique to that space: the desks. But the list doesn't end here: it requires the school disclose new behaviors that teach new concepts, which inculcate hygienic ways of living and to check the health of their students, in order to prevent infections, parasites and diseases. In short, it is imperative to school the teaching of a protective hygiene and school organization is reformulated according to medical-hygienic science.

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