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#### SCHOOL SPACES AND ARCHITECTURES

# THE REGULATIONS FOR THE CONSTRUCTION OF PUBLIC SCHOOL BUILDINGS IN BRAZIL: THE EXAMPLE OF THE STATE OF PARANÁ IN THE FIRST HALF OF THE 20TH CENTURY

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**ABSTRACT:** The purpose of this article is to analyze the regulations that guided the construction of buildings for graded primary schools for children in Brazil, specifically those located in the State of Paraná, between the years 1901-1938. The problematization that I propose places the child as the main user of this architecture, which, in the discourse of government regulations, was organized to house, protect and train future citizens and workers of the young Brazilian republic. The analytical components adopted in this research reinforce the importance of studies on architecture intended for the school universe, which, on the one hand, highlight that the normative grammar adopted in the various regulations and other construction documents for school buildings, were specific readings originating from the adult context of the political authorities, educators, doctors and hygienists in the elaboration of measures on the best way to shape the child in the school space. The choice of the first decade of the 20th century to set the stage for this research is justified because it was a period of frank expansion of Brazilian school architecture. Across the country, there was an increase in the demand for schooling and, consequently, the construction of new schools, which caused the need to review and prepare more recent versions of normative regulations about the construction of school buildings.

Keywords: School Architecture, History of Education, Primary School

## OS REGULAMENTOS PARA A CONSTRUÇÃO DOS EDIFÍCIOS ESCOLARES PÚBLICOS NO BRASIL: O EXEMPLO DO ESTADO DO PARANÁ NA PRIMEIRA METADE DO SÉCULO XX

RESUMO: O objetivo deste artigo é analisar os regulamentos que orientaram a construção de edifícios para o público infantil das escolas primárias graduadas no Brasil, especificamente as localizadas no Estado do Paraná, entre os anos de 1901-1938. A problematização que proponho coloca a criança como o principal usuário dessa arquitetura que, no plano discursivo das regulamentações governamentais, foi organizada para abrigar, proteger e treinar futuros cidadãos e trabalhadores da jovem república brasileira. Os componentes analíticos adotados nesta pesquisa reforçam a importância de estudos sobre a arquitetura voltados para o universo escolar, os quais, por um lado, destacam que a gramática normativa adotada nos diversos regulamentos e demais documentos de construção de edifícios escolares, eram leituras específicas originárias do contexto adulto das autoridades políticas, educadores, médicos e

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higienistas na elaboração de medidas sobre a melhor forma de moldar a criança no espaço escolar. A escolha da primeira década do século XX para montar o cenário para esta pesquisa justifica-se por ter sido um período de franca expansão da arquitetura escolar brasileira. Em todo o país, houve um aumento na demanda por escolaridade e, consequentemente, a construção de novas escolas, o que causou a necessidade de revisar e preparar versões mais recentes dos regulamentos normativos voltados para a construção de edifícios escolares.

Palavras-chave: Arquitetura Escolar, História da Educação, Escola Primária

### LOS REGLAMENTOS PARA LA CONSTRUCCIÓN DE EDIFICIOS ESCOLARES PÚBLICOS EN BRASIL: EL EJEMPLO DEL ESTADO DE PARANÁ EN LA PRIMERA MITAD DEL SIGLO XX

**RESUMEN:** El propósito de este artículo es analizar los reglamentos que orientaban la construcción de edificios destinados al público infantil de las escuelas primarias graduadas en Brasil, específicamente aquellas ubicadas en el Estado de Paraná, entre los años 1901-1938. La problematización que propongo coloca al niño como el principal usuario de esa arquitectura que, en el plano discursivo de las regulaciones del gobierno, fue organizada para albergar, proteger y formar a los futuros ciudadanos y trabajadores de la joven república brasileña. Los componentes analíticos adoptados en esta investigación refuerzan la importancia de los estudios acerca del tema de la arquitectura orientada al universo infantil escolarizado que, por un lado, destaca que la gramática normativa adoptada en los diversos reglamentos y demás documentos sobre la construcción de edificios escolares, fueron lecturas específicas originarias del contexto adulto de las autoridades políticas, de los educadores, de los médicos y de los higienistas en la elaboración de medidas de cómo mejor conformar al niño en el espacio escolar. La elección de la primera década del siglo XX para ambientar esa investigación se justifica por haber sido un período de franca expansión de la arquitectura escolar brasileña. Por todo el país, hubo un crecimiento en la demanda de la escolarización y, por consiguiente, la construcción de nuevas escuelas, lo que ocasionó la necesidad de revisar y elaborar versiones más recientes de los reglamentos normativos dirigidos a la construcción de edificios escolares.

Palabras clave: Arquitectura Escolar, Historia de la Educación, Escuela Primaria

#### INTRODUCTION

When Italian historian Carlo Ginzburg became interested in investigating inquisitorial trials dealing in particular with practices of witchcraft in Europe of the Late Middle Ages, he later "confessed" that he frequently understood himself to be an observer who followed the steps of the inquisitors as if looking over their shoulders, while they expected the accused to tell them everything they could about their beliefs, even though by doing so they would be at risk of being found guilty based on that information. Undoubtedly, this exercise of scrutiny required intensive analysis of the sources, in the topic Ginzburg (1986) called the evidential paradigm, in which the alterity of documentation provokes the historian into having dialogic interaction with his sources.

As you will perceive, I have placed emphasis on a diverse set of sources comprised of messages, regulations, instructions and administrative norms that guided the construction of school buildings, notably those intended to house primary schools in the state of Paraná (Brazil), between 1903 and 1938. This time period was chosen because it was one marked by a series of education reforms which have become fundamental for understanding the historical context of education in Paraná.

To assist with my approach, I needed to find more witnesses. But my readers can rest assured that I do not intend to set up a tribunal seeking legal opinions, since I acknowledge the limitations of that documentation which certainly undermine the talent of the "criminal investigator" or "psychoanalyst" in the topic adopted by Ginzburg (1980). Among those witnesses are the sources retrieved from the Paraná press (newspapers and magazines), replete with discursive elaborations which often served to strengthen the arguments that I found in the governmental documentation. They were joined by the battalion of architectural treatises, manuals and catalogues that revealed on my desk the multiplicity of "concealed" scenes that did not come to light in the administrative documentation.

Armed with all this information, I needed to establish a way, a method of interpretation that could alert me as to the risks of the anachronistic abyss. And reflecting on this need, I remembered the importance of the four levels of interpretation, used by the wise Jews of the 8th century, to study the texts of the Jewish tradition, known by the acrostic PaRDeS (O"T). The first level, P'shat (OV), "literal meaning", is concerned with what is on the surface of the wording in the form of a general explanation; the second level - Remez (I): "clues", is responsible for developing the study of sources, beyond the literal meaning; the third level, Derash (VT), "interpretation", extracts meanings by analyzing words, their use, as well as similar occurrences in other contexts. Finally, the fourth level, Sod (TIO), deals with the "secrets" of a knowledge hidden in the sources.

I therefore selected this methodology as a tool for analysis of the multiplicity of meanings present on the surface of the sources, so as to achieve a better interpretation of the structure of their

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narratives, in particular the textual contradictions (p'shat) present on the surface of the administrative documentation as clues (remez) that led me to other levels of interpretation (derash and sod).

When beginning the exercise of comparing the sources, I identified with the concept of evidential paradigm proposed by Ginzburg, finding closeness with the PaRDeS (O"775) method, which also has in its basis the necessary dialogic interpretation for preparing additional meanings that accompanied me in understanding the contexts of the statements in all the documentation selected. In this way, based on this careful convergence, which by itself was responsible for defining my interpretative strategies, I sought to develop the four levels of PaRDeS (O"775), principally with regard to the organization of my investigation, using questions that nurtured the entire interpretative process and which unfolded in different ways, according to their respective levels of knowledge.

#### EVIDENCE ON THE DESK: THE PURPOSE OF AN INVESTIGATION

It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories instead of theories to suit facts.

(Sherlock Holmes)<sup>2</sup>

When turning my gaze towards the time period covered by my research and its sources, which were still scattered without order on my desk, the source that initially awoke my curiosity was the 1901 Paraná Public School Regulations, the first to be published in that state in the 20<sup>th</sup> century (PARANÁ, 1901).<sup>3</sup> In the meantime, after reading those wide-ranging Regulations, I felt frustrated by not having found significant clues dealing with the building and maintenance of buildings intended for primary school education in Paraná.<sup>4</sup> The small amount of evidence I found was on the surface of Article 36 of Chapter V (*Schools*), Title III (*Primary Education*), containing superficial statements such as this: "Schools must operate in places most appropriate for student achievement and attendance..." (PARANÁ: 1901, p. 6).

This trail had no decisive impact, given that I had already gathered that information from State President Francisco Xavier da Silva, manifest in the speech he gave to the state representatives, a

<sup>&</sup>lt;sup>2</sup> This statement was made by the character Sherlock Holmes in the detective novel by Arthur Conan Doyle, *A Scandal in Bohemia*, published in the *The Strand Magazine*, in July 1891 (DOYLE, 1891). It was later incorporated into the collection entitled *The Adventures of Sherlock Holmes*.

<sup>&</sup>lt;sup>3</sup> According to Ettienne Baldez Louzada Barbosa, in the monarchical period, between 1854 and 1883, the provincial government enacted important legislation on public instruction in Paraná, including the Public Instruction Inspection Regulations of 1857, 1871 and 1874, as well as the Public Instruction Organic Regulations of 1876 and 1883 (BARBOSA, 2012; see also ANJOS & BARBOSA, 2013; FRANÇA, 2014 and 2019).

<sup>&</sup>lt;sup>4</sup> The first regulations of the republican regime to deal with the public instruction framework established in Paraná, were contained in Decree No. 31, dated March 29<sup>th</sup> 1890 (Paraná, 1890). However, it only remained in force for a few months, given that due to administrative and political questions, it was replaced by Decree No. 64, dated April 11<sup>th</sup> 1890 (PARANÁ, 1890a).

few weeks after the Statute had been signed. On that occasion he stated that "schools operate in houses rented by the State, at a relatively substantial cost, and lack furnishings". (PARANÁ, 1901a, p.5)

The existence of rules for an architectural grammar specific to the public school universe had not been deleted from other State administrative documents and, even less so, had been forgotten or become unknown by these authorities. Something therefore already existed, and at that moment when I was raking for more clues and trails that might explain to me the reasons for the silence of that source, the second level of knowledge of the PaRDeS method, Remez (קָבֶּהֶ), helped me to conjecture that for those republican authorities it was still viable to apply the school building model adopted in the determinations published during the monarchic regime, consolidated in Act No. 287, dated October 14<sup>th</sup> 1884, which provided the rules on the Building of School Houses.

On the one hand, it is appropriate to highlight here Article 4 of the 1884 Regulations, as it deals in a particular way with school house conditions, but on the other hand it does not specify how the architectural and spatial arrangements of these institutions should be.

Art. 4° – School house buildings shall obey the following principles:

- § 1°. Their preferred location shall be:
  - 1) the center of the school district, and within this:
  - 2) the place most suited to hygiene requirements, and within this:
  - 3) the plot of land enabling isolation for the school building and surrounding gardens.
- § 2°. As to the disposition of the building, it may contain:
  - 1) a vestibule;
  - 2) two ante-rooms, one to be used as the teacher's parlor, and the other as a cloakroom for students;
  - 3) the classroom;
  - 4) the gymnasium, or covered veranda;
  - 5) a water closet, or two in the case of mixed schools;
  - 6) the playground or yard;
  - 7) a surrounding garden.
- § 3°. The following is required for the classroom:
  - 1) surface area corresponding to at least 1m.9.20 ms. per student, in the case of a single-place desk, or 1m.9 in the case of a desk with two places;
  - 2) cubic area never less than 5.5 ms.
  - 3) rectangular, whereby length and width shall be in the proportion of 11/2:1 approximately;
  - 4) direct light only on the left side, or on both sides, but brighter on the left;
  - 5) ventilation devices.

<sup>&</sup>lt;sup>5</sup> Still in the 19th century, other norms were gradually added or replaced existing ones, such as the 1891 Public Instruction Regulations (PARANÁ, 1911); the 1892 State Reform of Public Education (PARANÁ, 1911a), the 1892 Public Education Regulations (PARANÁ, 1892) and the 1895 Public Instruction Regulations (PARANÁ, n.d.)

<sup>&</sup>lt;sup>6</sup> The Regulations on the Building of School Houses were divided into four chapters: I (*School Houses*, Articles 1° - 6°); II (*School Funding*, Articles 7° - 11°); III (*Entrepreneurs*, Articles 12° - 27°) and IV (*General Provisions*, Articles 28° - 30°). They were published in full on the first page of the *Jornal Dezenove de Dezembro*, edition number 247 (October 23<sup>rd</sup> 1884) and number 254 (October 31<sup>st</sup> 1884).

§ 4°. As much as possible the outside shall keep to the elements of the internal disposition. (DEZENOVE DE DEZEMBRO, October 22 and 31, 1884, p. 1)

With this suspect and armed with these first vestiges left by the thesis by Franciele Ferreira França (2019), I became sufficiently secure to understand that the norms for constructing school buildings did not change as quickly as the change from the monarchic to the republican regime in 1889. In view of this, the technical rules adopted for the construction of school buildings gradually took on new architectural and spatial formats as public primary education was reorganized in the state.

These fingerprints have undoubtedly provided some clues, but not in sufficient quantity to be able to state the reasons why these technical norms had been out of date since 1884. What immediately drew my attention in this scenario was the government agenda proposing reforms to reorganize primary education in Paraná, but which, on the other hand, was not aligned with the agenda for reshaping architecture so as to organize the school space itself.

Several of the considerations of government members defended what appeared to be well known, although they were not so much as able to envisage the dimensions of the particularities of this type of architectural grammar, such as those found in the 1903 Paraná State Public School Internal Regulations:

Art. 8°. Each school shall operate in a public or private building, in a place determined by the district School Inspector and by the General Director, in the state Capital, with a spacious, clean, well-ventilated and well-lit classroom.

 $(\dots)$ 

Art. 55°. In public schools the following hygiene requirements, among others, shall be observed:

1 – Classrooms shall be spacious, well-ventilated, avoiding direct draughts, and be well-lit, with the light entering preferably from left to right. (PARANÁ, n.d. (a), p. 93 and 98)

Over the years that followed, positions of different General Directors of Public Instruction were published that awoke my interest. Starting with Victor Ferreira do Amaral e Silva who, in 1902, complained to the State itself about the lack of appropriate buildings (PARANÁ, 1903, p. 38); Arthur Pedreira de Cerqueira, in 1906, insisted that well-lit, spacious and well-ventilated school houses be built, in accordance with the climate of the region where they were to be built (PARANÁ, 1907a); in 1910 Jayme Dormund dos Reis called for purpose-built buildings along the lines indicated by science (PARANÁ, 1910, p. 5). In turn, in 1914 Francisco Ribeiro de Azevedo Macedo was more generous in his report, announcing that in general school houses were of good architectural style, well-ventilated and well-lit (PARANÁ, 1915, p. 3)

Among the different Education Inspectors I was also able to distinguish the mismatch between the discourse on the modern school and lack of clarity about procedures for constructing

buildings appropriate for the civilizational exercise that should be led by education. I noted this in several allegations, including that made by renowned teacher Sebastião Paraná who, as the School Inspector of Curitiba (capital of the State of Paraná), denounced, in 1907, that almost all schools "(...) operate in small private rooms, with lack of air and light, where masters and disciples do not have the comfort needed during the laborious school toil." (PARANÁ, 1908, p. 53)

Before being rebuked for being too exacting when probing this evidence, I admit that the annual activity reports of the General Directors of Public Instruction, as well as inspector's reports, were not obliged to present a set of principles on how school buildings should be constructed. And, at my own risk, I have exempted the signatories from my complaints.

On the other hand, however, very much because of not having reached signs of information about the precise planning of the school space, I will insist that the *modus operandi* with which these authorities perceived the educational reality that surrounded them, does not relieve them of their duty of commitment to the matter of school architecture.

And based on this premise, I disemboweled from the verisimilitude of allegations made by the Paraná press, calls for more efficacious postures capable of modifying the political scenario with regard to education. I found an initial aspect in the magazine entitled *A Escola*, published by the Paraná State teachers' guild, which did not spare unfavorable comments about the government:

Our schools, unfortunately, with rare exceptions, operate in small rooms, nearly all of small dimensions, lacking light, air and other necessary elements. (A ESCOLA, 1906, p. 62)

Another complaint came in the wake of the context of the political debates accompanying the 1907 Public Instruction Regulations (PARANÁ, 1907), when the ironical writers of the magazine O Olho da Rua<sup>8</sup> did not spare harsh criticism of the commission responsible for systematizing what they considered to be nothing less than a major setback for education in the state.

Not before time the publication of the famed regulations prepared at the cost of so much sweat and so many sleepless nights by the also famed threesome has come to an end. A complete disgrace, a frightful labyrinth, shameful for Paraná, that wants to have the honor of rivaling with other national departments on the matter of public education! From the point of view of modern teaching, this monster appears to us to be indefectible, flawed in its multiple spikes of incommensurable ignorance. (O OLHO DA RUA, January 18th 1908)

<sup>8</sup> According to Marilda Queluz (1996), the first edition of the magazine O Olho da Rua was launched on April 13<sup>th</sup> 1907, and continued to be published until 1911.

<sup>&</sup>lt;sup>7</sup> According to Cláudia Zanlorenzi (2014), this magazine was in circulation between 1906-1910, under the alternating editorship of teachers Sebastião Paraná and Dario Vellozo.

However, in contrast to these stances, the newspaper A República, published by the Republican Party of Paraná, defended the government's actions:

The capital's new Nursery School building was handed over to the State government by the respective building company yesterday. This fact, along with a further 10 elegant and comfortable buildings for public schools in the process of being built throughout the State, is very eloquent in endorsing the care that the meritorious Dr. Xavier da Silva, current President of Paraná, bestows on public primary instruction, the greatest obstacle to the enhancement of which was precisely the lack of buildings appropriate for schooling and which met all hygiene and comfort requirements. The building of school houses therefore concurs as a valuable element for the progress of education and extinguishes once and for all constant complaints about defective or poor school structure. (A REPÚBLICA, August 25th 1910)

Despite the expressive impact that these voices provoked on my analysis, I did not give up on (re)seeking something new in the discourse of my interlocutors. I had no option other than to return to my readings on the Public Instruction Directorate and ferret though the 1909 Paraná State Public Education Organic Regulations (PARANÁ, 1909), and the 1912 Paraná State Public Instruction Regulations. (PARANÁ, 1913)

Once more I found myself surrounded by hundreds of articles, paragraphs and subparagraphs in search of information about the morphology of school building space and architecture but, it must be said, they did not provide the investigation with any great novelty, even though they are documents produced by politically opposed governments! However, I meditated and pondered that if I wanted to find a hidden source, the best place would be the pile of administrative documents I had put on my desk.

And some clues that, undoubtedly, contributed to unblurring my magnifying glass and to my seeing more clearly the political and administrative context of the discussion of those two regulations were the academic writings of Sidmar dos Santos Meurer (2019), who deciphered that there was not much difference between them, and those of Diogo Rodrigues Puchta who perceived that the purpose of the 1912 Regulations was to reorganize public primary education in Paraná in accordance with the principles of what was then called modern teaching (PUCHTA, 2007, p. 70). Among the few innovations, one contained in the 1909 Regulations determined that the school inspector should examine the hygiene status of the school building, while the teacher should take care of the conservation of the building.

I examined the words of the Secretary of the Interior, Justice and Public Instruction, Claudino Rogoberto Ferreira dos Santos, especially his authorization of the publication of Ordinance No. 52, dated October 23<sup>rd</sup> 1914, and found a determination similar to that of the 1909 Regulations, namely that inspectors, headmasters and teachers should pay special attention to school buildings and their capacity to house children and hygiene status; ventilation and lighting conditions; existence of

drinking water, sewerage, latrines and whether their location was well placed in the town to meet the needs of the surrounding school population. (PARANÁ, 1915)

With this information I could not fail to recognize that the education authorities were committed to reforming public education, as they did not cease to sanction acts, decrees, laws, notes, ordinances and regulations regarding education during this period. Some, undoubtedly, more emphatic than others. In this way, they provided proof of moderate attention to the precarious reality of their school houses and to the conditions of their teachers and students enrolled at them.

However, without wishing to run the risk of losing heart with these voices of the Department of the Interior, Justice and Public Education, I was persuaded by one of their sources to pay heed to the folder containing documents of the State Department of Commerce, Public Works, Land and Highways, as in them, undoubtedly, there would be more likelihood of finding other fingerprints to help me understand the State's policy on investment in constructing school buildings. And the note written at the top of my notebook did not allow me to forget that during this visit I should be alert with regard to the investigative procedures of *Remeş* (127).

There I found the Report by the Secretary of Commerce and Public Works, Marins Alves de Camargo, submitted to the State President, which stated:

Two or three types of each school group were studied. Thus we have: model school groups, with 8 classrooms, a large room for joint lessons, an office for the school Administration, teachers, janitor, etc., with the cost of these buildings varying between 60 and 80:000\$000; groups with 4 rooms in towns and villages, costing between 12 and 16:000\$000 when built of wood, or between 30 and 40:000\$000 when built of masonry; groups with two rooms in villages and hamlets, costing between 15 or 20:000\$000 when built of masonry, or between 5 and 8:000\$000 when built of wood. (PARANÁ, 1913a, p. 116)

My disappointment with this finding was the fact of it being easy to ascertain school buildings of different sizes built of masonry cost more than school buildings built of wood. As Sherlock Holmes would say, there is nothing more deceptive than an obvious fact. And, broodily, I was led to recall, even against my wish, that the State sought to invest more in more visible spaces in the urban scene, such as the model school groups in the state capital. 10

My apparent sensation of frustration was relieved by just a few of the articles of the Paraná Teaching Code (Decree No. 710, dated October 18<sup>th</sup> 1915), Title III (*Primary Education*), Chapter IX

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<sup>&</sup>lt;sup>9</sup> This Sherlock Holmes quote comes from the detective novel, *The Boscombe Valley Mystery*, published in The Strand Magazine, in July 1891 (DOYLE, 1891a).

<sup>&</sup>lt;sup>10</sup> The Acting General Director of Public Instruction regretted that "One of the great difficulties in setting up schools in suburbs and colonies is the lack of appropriate houses. The building of school houses in cities is very much on target, but I also deem it to be essential to construct economical rustic buildings in rural centers, endowed with the necessary hygiene conditions, in which public instruction can take place." (PARANÁ, 1905, p. 51)

(School buildings and furniture; School Hygiene). There I finally discovered a very rare update of the systematic rules for constructing school buildings in the state of Paraná which, since 1884, had changed very little. In view of this, I turned my attention to articles 172° and 173°, as they were proof that I had been in search of, if I am not mistaken, since the last time I read the documents of the Department of Works.

#### CHAPTER IX

School buildings and furniture; school hygiene

Art. 172° – To the extent that the State's financial resources so allow, school houses shall be built in cities, villages and larger hamlets that have not yet been provided with these improvements.

§ 1° – Where there are no school houses or where they are insufficient for all schools, they, or some of them, will operate in private houses with the best possible conditions of hygiene, and teachers shall be assisted by the State to pay the respective rent, in accordance with the prevailing price chart.

Art. 173° – Each State school building shall have the following:

#### I external requirements:

- a) be, as far as possible, located centrally in relation to the population it is intended to serve;
- b) the school house shall be positioned in the middle of its plot of land, which shall be enclosed by a wall or railings and shall be of size sufficient to contain gymnastics and recreation grounds, washbasins, water closets, gardens, etc;
- c) be easy to access and secure;
- d) not be next to factories or other establishments where loud noises are inevitable, nor next to unhealthy places;
- e) have its land perfectly drained, so that water flows off it easily.

#### II internal requirements:

- a) each classroom shall be rectangular, with its surface area calculated according to a ratio of 1m.20 per student;
- b) the school house shall have a cellar the height of which shall never be less than 1m.50 between the surface of the ground and the floor of the building.
- c) each classroom shall have wide, high and numerous rectangular windows so that the glazed surface area is equal to at least one quarter of the surface area of the floor of the classroom;
- d) have water closets conveniently isolated from the classrooms, supplied with water and ventilator devices, built in such a way that they can easily be kept in a state of maximum cleanliness;
- e) have a vestibule and special entrance for each classroom;
- f) have communicating doors between each classroom;
- g) have a special room to house a small school museum and for storing manual assignments and respective materials;
- h) have good ventilation in all classrooms with the air coming directly from outside the building;
- i) have all recommendable conditions for teaching and hygiene. (PARANÁ, 1915a, p. 36-37)

When I finished reading this source, I had an impression of déjà vu and, immediately, I remembered that I had kept some European regulations from the study missions I made in France and

Spain. Comparing them, I can state with certainty that the recommendations set out in chapter IX of the 1915 Education Code,<sup>11</sup> very possibly were taken from other statutes that underlied the wording of the Paraná legislation, beginning with European treatises. Not that such a procedure was inappropriate, after all, circulation of knowledge was one of the ways of education authorities keeping themselves tuned into modern discourse. The topics discussed about school buildings confirm the presence of ideas of the hygienist movement, principally those that configured architectural health grammars in their aspects of salubrity.

I remembered the Spanish case, for instance, of the landmark rigorous hygienist norm published in 1905 (*Instrucción Técnico-Higiénica relativa a la construcción de Escuelas*), <sup>12</sup> the objective of which was to condense the opinions most authorized and accepted by pedagogues and hygienists about the multiple points related to Spanish primary schools, especially themes related to the construction of new school buildings. In that norm I found a similar provision to that stated by Article 173 of the 1915 Code, which recommended that school buildings should not be located close to factories or noisy and unhealthy places (PARANÁ, 1915a).

Location – schools must be located in places that are high, dry, sunny, easy to access and isolated from other buildings; if possible close to gardens, squares or wide streets with little traffic, avoiding closeness to cemeteries, hospitals, barracks, public meeting places and entertainment centers, unhealthy occupations, taverns and, in general, anything that can cause mephitis of the air and expose school students to obstacles they need to be kept away from. (ESPAÑA, 1912, p. 35)

The richness of the ideas surrounding these documents caused countless clues to emerge from their surface that certified the presence of several other forms of caution need to preserve school student's health such as, for instance, ventilation, lighting, location, materials and furnishings. However, undoubtedly, both the Brazilian and the Spanish discussion on this came late when compared to French laws and regulations, given that they had intensified their concerns with the universe of school children since the second half of the 19th century.

In order to fortify my interpretation that these ideas had been shared and circulated among Europeans, with repercussion and adaptation to the Brazilian context, I turn to the Circular Memorandum dated July 30<sup>th</sup> 1858. It contains the prerequisites for choosing a plot of land to house a school in France in the 1800s, and it already paid attention to the location of the school building by determining that it be at least 100 meters distant from any noisy, unhealthy or dangerous establishments. Later, the Circular Memorandum of January 18<sup>th</sup> 1887 increased this distance to at least 400 meters

<sup>&</sup>lt;sup>11</sup> In 1917, after having been slightly altered, the 1915 Education Code was replaced by a "new" Education Code, consolidated by Decree No. 17, dated January 9th 1917. (PARANÁ, 1917)

<sup>&</sup>lt;sup>12</sup> According to Antonio Viñao, the *Instrucción Técnico-Higiénica relativa a la construcción de Escuelas* was the first official document proposing planned construction of graded schools in Spain. (VIÑAO, 2004; 2010).

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(FRANCE, 1935). Notwithstanding, according to Anne-Marie Châtelet, the main regulations for 19<sup>th</sup> century French school architecture were contained in the Circular Memorandum of June 17<sup>th</sup> 1880, signed by the Minister of Public Instruction, Jules Ferry, based on the conclusions of a committee comprised of architects and educators (CHÂTELET, 1999). In that document I was able to ascertain that other borrowings from French legislation can be found in the 1915 and 1917 Education Codes, as well as in the 1918 Paraná State Health Service Regulations, <sup>13</sup> chapter II of which contained recommendations for schools. (PARANÁ, 1918)<sup>14</sup>

As I moved forward with my hypotheses and suspicions, the set of all those codes helped me to make sense of and understand the political universe of education, assisting me in seeing and observing information and details of this plot, however obvious they might be.

And a new witness that came on stage was Paraná's Inspector General of Education, <sup>15</sup> César Prieto Martinez, one of the protagonists of the 1920 Education Reform, which dedicated special attention to the construction of new buildings for public primary education.

I perceived straightaway that César Prieto Martinez was a fearless critic of the hygiene conditions of the buildings allocated to public primary education in Paraná, as well as of the guidelines for architectural plans for its school buildings. According to this witness:

Such principles of school architecture, easily observable, have been forgotten in our buildings, making them defective from all points of view and unfitting for the purposes for which they are intended. Nearly all of them err in terms of classroom size, format and layout, inconvenient distribution of light, and lack of internal communication. (PARANÁ, 1924, p. 42)

These are criticisms similar to those already published previously! I must confess that I was unable to conceal all my discontent at finding the same *déjà vu* report, with other fingerprints, that insisted in returning to the scenario of my investigation. Acknowledgement by these education and government authorities that something should be done was used as a subterfuge, the purpose of which was to veil the incompatibility between the reality of primary school buildings and modern teaching discourse, thus proving the lethargy that still remained in their actions.

Taking the following testimony, I have to recognize that adherence by César Pietro Martinez to the principles of modern hygiene facilitated some of the activities of the General Education Inspectorate valuing the quality of school architecture as an innovative constructive policy, based on the experience of the State of São Paulo.

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<sup>&</sup>lt;sup>13</sup> The purpose of these Regulations was to ascertain issues relating to public hygiene in Paraná. With regard to locations and dwellings, the document states that it proposes "adoption of the means necessary to prevent, combat or mitigate endemic and epidemic diseases capable of being transmitted to mankind and animals". (PARANÁ, 1918, p. 375).

<sup>&</sup>lt;sup>14</sup> Decades earlier, in 1882, Paraná had enacted the Land Health Service Regulations which also, in another health context, prescribed actions to promote health and combat diseases. (PARANÁ, 1892a)

<sup>&</sup>lt;sup>15</sup> The General Education Inspectorate was created by Law No. 1999, dated April 9th 1920.

The most outstanding works of this nature took place in S. Paulo, under the guidance of Dr. Ramos de Azevedo, a renowned authority. In recent years, another not less illustrious engineer, Dr. Mauro Álvaro, director of the State Sanitary Engineering Service, stamped a new direction on the voluminous construction of buildings for school groups and rural schools, completed during the meritorious governments of Rodrigues Alves and Altino Arantes. (PARANÁ, 1924, p. 45)

The praiseful mention of Mauro Camargo in César Prieto Martinez's message refers especially to the manual entitled "Projetos de Grupos, Escolas Reunidas e Ruraes" (Projects for School Groups, United and Rural Schools), published in 1920 (CAMARGO, 1920). It was a manual the purpose of which, according to Ana Paula Pupo Correia, as stated by Mauro Camargo himself, was to present the main components that provided a template for organizing school building projects. In addition to several proposals for school group buildings that were erected in the State of São Paulo, the publication provided other examples of school programs designed by hygienists and architects from other countries. (CORREIA, 2013). It is worth remembering that graded schools were gradually adopted as a model for Brazilian primary school education right from the early years of the Republic. And in Paraná, the pace at which school groups were consolidated required a set of adjustments prescribed in countless teaching proposals that influenced the dissemination and defense of the renewal of the processes of primary education organization (SOUZA, 2004). <sup>16</sup>

As I considered it to be important in this panorama, I went in search of hygienists. Among them I have chosen the manifestations of three witnesses from the area of medicine.

The first manifestation made in 1929 by public health physician, Eurico Branco Ribeiro, <sup>17</sup> asked for solutions for the inadequate sanitary conditions he found in school buildings in the city of Guarapuava, located in south central Paraná. I recalled that I had already been alerted by other witnesses about this same precarious situation. Even so, I decided to take into consideration Dr. Eurico Ribeiro's testimony complaining about carelessness with regard to hygiene norms. Let us see and note what he said:

In adequate buildings, with good lighting, appropriate school materials, quality sanitary facilities in good working order – in places with these conditions children can be made to follow a program compatible with their age and intellectual ability and be forced to practice hygienic acts they become familiar with for the good of their health and the normal development of their bodies. (RIBEIRO, 1929, p. 100)

<sup>&</sup>lt;sup>16</sup> In 1935, there were 49 School Groups and 897 Isolated Schools in Paraná. By the next year there were 54 School Groups and 1065 Isolated Schools. (PARANÁ, 1937)

<sup>&</sup>lt;sup>17</sup> For a more in-depth understanding of the role played by Eurico Branco Ribeiro in the Brazilian public health movement, I suggest consulting the dissertation written by Cláudia Santos (2018)

Similarly, in 1932, Dr. Mário Gomes, who had already been a school medical inspector<sup>18</sup> at the time César Prieto Martinez was Paraná's Inspector General of Education, put forward his point of view about school buildings in the Paraná Medical Journal:

When building and organizing these Schools, all known and recommended principles of school hygiene must be applied, ranging from a dry site, with porous soil, where there will be lawns and trees, to well-ventilated classrooms, with walls decorated with motifs appropriate for young people, furniture in keeping with children's age and stature, cloakrooms and restrooms, special washbasins and sanitary facilities, all under the caring administration of a schoolmistress, with assistants having the vocation and specialized training for this occupation. (REVISTA, 1932, p. 123)

Finally, in 1933, Dr. Milton de Macedo Munhoz, one of the founders and first chairman of the Paraná Medical Association (*Associação Médica do Paraná* - AMP) and of the Paraná Regional Medical Council (CRM-PR), was of the same opinion as his public health physician colleagues, when he wrote:

Buildings that house schools must be built in accordance with sanitary engineering, with adequate school materials, sufficient sanitary facilities kept rigorously clean and, in short, the school environment must be perfectly sanitized. (REVISTA, 1933, p. 15)

I was grateful for the testimonies of these three medical authorities, but in order to make progress with my observations, I was led to look for other tracks that might lead me further forward in the 1930s. I knew beforehand that it was a period of intense changes on the national and international political scene, a time of progress and setbacks for Brazilian economic development, but also a time of conspiratory circumstances that would lead to a dictatorship coming into force, headed by Getúlio Vargas, who chose the gaucho Manuel Ribas to be the State of Paraná's 3<sup>rd</sup> Intervenor.

The information I obtained from my sources confirmed that Intervenor Manuel Ribas, during his long stay in power (1932-1945), supported the development of school architecture, as can be seen in his general plan for building modern school groups, which determined, apart from constructing new buildings, revitalization of several school buildings which, according to him, left a lot to be desired because of lack of necessary facilities for students and which no longer met the needs of education (PARANÁ, 1935). As such, there was now an urgent need to revigorate or set up where none existed, children's playgrounds and libraries, museums, laboratories, canteens, sportsgrounds for physical education, in the manner prescribed in the 1932 School Group Internal Regulations and Program

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<sup>&</sup>lt;sup>18</sup> The School Medical Inspection Service was created by Law No. 2095, dated March 31<sup>st</sup> 1921, with the aim of inspecting schools and school groups with regard to hygiene. According to Dr. Mário Gomes: "(...) alongside the role of direct inspection that falls to the school medical Inspector, his principal responsibility is to provide educational actions, especially with teachers." (PARANÁ, 1926, n.p.)

(PARANÁ, 1932), as well as the commitments he announced in his governmental messages.<sup>19</sup> Here is an example:

Modernizaton of the plan for school buildings, with new architectural plans, drawn up in accordance with the most rigorous teaching requirements, modern architecture and hygiene, brought from São Paulo and Rio de Janeiro and adapted to the general conditions of our environment. (PARANÁ, 1937, p. 31)

I was not surprised by Paraná's governmental leaders and education authorities being fascinated with São Paulo school architecture and, although less intensely, that of Rio de Janeiro. This link continued to be a source of discursive seduction, principally when the intention was to associate enunciations of modern Paraná teaching with those that circulated in the context of São Paulo.

In order to reinforce my arguments, I take as an example the experience of the city of São Paulo with Arthur Saboya's Code of Works, <sup>20</sup> Law No. 3427, dated November 19<sup>th</sup> 1929 (SÃO PAULO, 1929), which was very probably one of the inspirations of Manoel Ribas' team of architects. In Chapter VI (*Schools*), Part II (*Buildings for special purposes*), of that publication, there is information about tiling and coverings (Art. 405°), classroom lighting (Art. 406°), ventilation (Art.. 407°), stairways (Art. 408°), classroom dimensions (Art. 409°), height of windows (Art. 410°), height of classroom ceilings (Art. 411°), latrine and washbasin facilities (Art. 412°). In the long run, it is my opinion that in practical architectural terms, Arthur Saboya's Code of Works, did not bring great novelties to the building construction norms that were already being followed for Paraná's primary schools.

And shortly before finishing spying over the shoulders of the interlocutors who contributed to my observations, another witness arrived in time to collaborate with my research: the 1938 Paraná State Health Regulations (PARANÁ, 1938). They were my last piece of evidence, despite admitting that I left out of my research several other characters and sources for whom, although they would have liked to give testimony and take part with what they had to say, there was no longer time for me to attend to them, as I needed to bring my investigation of this case to an end.

The 1938 Health Regulations contained some, but not many, categorical warnings for those who built school buildings, particularly that they should not be neglectful with regard to classrooms having high ceilings, being well-lit by windows that let sunlight in and having room for up to 40 children. And that they had a sufficient amount of washbasins, water fountains and toilets in keeping with the number of students and, finally, further instructions already made clear in earlier regulations, that there

<sup>&</sup>lt;sup>19</sup> In a message to the Assembly of Representatives, in 1936, Manoel Ribas, underscored in his speech that right from the beginning of his stay in office he had paid attention to "(...) school buildings, which were practically inexistent in the State, since, excluding some truly valuable buildings in Curitiba, Ponta Grossa and Paranaguá, there was nothing else thoughout the State's entire vast territory." (PARANÁ, 1936, p. 8)

<sup>&</sup>lt;sup>20</sup> Arthur Saboya, together with Silvio Cabral, were designated to review all municipal urban laws in force in the city of São Paulo since 1886. The results of all these efforts were brought together in municipal Law No. 3427, dated November 19<sup>th</sup> 1929. Arthur Saboya's Code was only sanctioned in 1934, but it remained in force until 1975.

should be partially covered recreation grounds proportional to the surface area of the classrooms.<sup>21</sup> In short, what I was able to observe with regard to Article 214° of the Health Regulations, was that their guidelines did not differ from earlier recommendations.

Having reached the nightfall of my investigation, I face restrictions with regard to time and pages that prevent me from going further than I vowed to at the dawn of this journey. And the time has come to set forth my conclusions and to review the results of my investigation.

#### FINAL CONSIDERATIONS

I believe that if I managed to achieve a reasonable level of interpretation, this was only possible thanks to the clue-based interaction that I sought to have with the different testimonies I gathered, the evidence of which revealed points of view that helped me to understand matters relating to the syntax of the architecture and space planned for Paraná's public primary schools. The further forward I moved with my investigations, the more it was essential to have at my side the levels of interpretation provided by the PaRDes ("Tpp) method, their being an ally like John Watson was for Sherlock Holmes, constantly warning me not to make hasty theories based only on literal meanings (P'shat - UVP). By delving under the surface of the evidence provided by the sources, I imagine that I was benefitted by the clues (Remez - Tpp) extracted from the details that the documents and witnesses brought. This gave me confidence to achieve the third level of interpretation (Derash - WTP) and, in this way, develop meanings and interpretations with regard to the theme.

When verifying and reviewing the administrative documentation that I organized in order to conduct this research, I can assure the reader that for the period between 1901 and 1938 it was not possible to find a consistent repository in the format of a manual or catalogue published by the State of Paraná, specifically dealing with the construction of school buildings. My suspicion throughout the investigation, which in the end became a conviction, is that norms and recommendations on school architecture published in messages, reports, laws, decrees and acts of the Paraná public administration, were a deliberate borrowing of successful guidelines that were being implemented in the state of São Paulo which, in turn, had been benefitted by the circulation of knowledge coming to Brazil from abroad, especially guidelines originating from the experience of school architecture in Western Europe.

All the effort of investigating my sources facilitated my understanding that the hard core of the discursive scales was triangulated in the following testimonies: the 1903 Paraná State Public School

<sup>&</sup>lt;sup>21</sup> For further information about the process of institutionalizing Paraná primary school recreation grounds in the early decades of the 20<sup>th</sup> century, I suggest consulting Sidmar Meurer (2018).

Internal Regulations, the 1915 Education Code and the 1938 Health Regulations. Right from the publication of Act No. 287 on October 14<sup>th</sup> 1884, it was undoubtedly these administrative documents that provided the regulations on building school houses, and which best defined the architectural morphology for the universe of public primary schools in the State of Paraná. The other testimonies included in the investigatory process effectively participated in the preparation of other narratives. Some even brought force to bear on this discursive triangle, but none of them, without exception, including the general plan for building modern school groups at the beginning of the Manuel Ribas administration, diverged from the proposals announced in these three documents.

This, however, was not sufficient to throw light on blind spots that I found in my argumentation, and this partially hindered my attempt to elucidate questions that troubled me. Among these, I was aware of countless examples of school group buildings built in that period which adopted monumental and sumptuous architectural grammar. I also knew that the majority adopted the eclectic style as a plastic language for their façades, as well as Art Deco with effect from 1930, although with less intensity.

Yes! In their respective contexts, the architects and engineers of the Department of Works Public Highways, planned them based on the 1903 Regulations, the 1915 Code and the 1938 Regulations. After all, the requirements for constructing school buildings to be followed by builders were well known. However, those documents were undoubtedly not enough to guide them on all matters needed to formulate an architectural morphology, and I deduce that other sources of information were also used.

Among them, treatises, manuals and books on architecture that circulated in Europe and America were certainly a fundamental source of reference and motivation for the team of the Paraná Works Department, bearing in mind that those publications formed part of the library of engineering and architecture students in Brazil. Examples include: Traité d'architecture théorique et pratique (TUBEUF, 1890), Traité de constructions civiles (BARBEROT, 1895), Éléments et théorie de l'architecture (GUADET, 1900), Traité d'architecture: éléments de l'architecture, types d'édifices, esthétique, composition et pratique de l'architecture (CLOQUET, 1900), Les constructions scolaires en Suisse (BAUDIN, 1907) and School Architecture or contributions to the improvement of school-houses in the United States (BARNARD, 1842). It is also plausible to state that, with effect from the 1920s, the São Paulo manual entitled Projetos de Grupos, Escolas Reunidas e Ruraes (Projects for School Groups, United and Rural Schools), by Mauro Camargo, and Arthur Saboya's 1929 Code of Works, were widely used by the Department, very much so because of their adaptation of foreign treatises to Brazilian reality and also because using them was facilitated by their being published in Portuguese.

Now that this article is being finalized, I am not able to measure the extent to which my pursuit of meanings distanced me from the fourth and final level of interpretation (*Sod* - 710), which deals with more profound meanings hidden in sources. When reviewing this article, I note that I have kept literal meanings in the countless citations I used over the course of my argumentation. I did this with the

aim of using them as a resource that might lead me to clues hidden in the discursive appearance of the documentation. And the clue that I consider to be most preponderant relates to the admiration that Paraná's education authorities and public service managers nurtured for the school architecture experience taking place in the State of São Paulo. On the one hand, the intensity of that seduction dimmed the originality of Paraná's own morphologies for its school buildings and, on the other hand, it made it easier for them to prepare innovative manuals, codes and regulations. I ponder whether perhaps it was in their interest, given the ease of taking something that was ready and only having to adapt it to the reality of Paraná. As such, the few articles published in Paraná's regulations were in keeping with the architectural scene, with the spontaneous and declared acceptance of grammars and models widely circulating in Brazil, the inspiration of which was strongly foreign.

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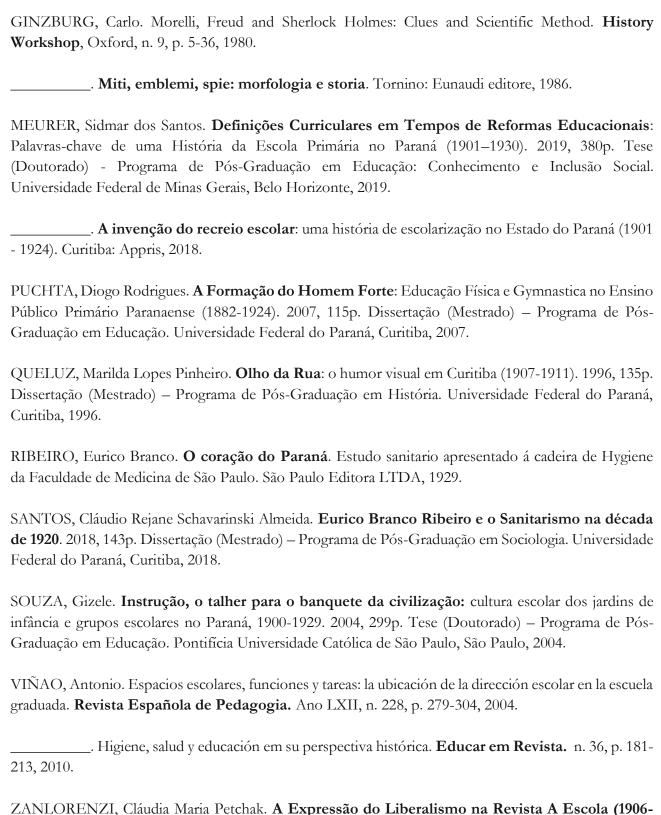
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