

Annalucia D'Erchia  
**Typological research for post-war school buildings in Milan.  
 Arrigo Arrighetti pioneer of modernity**

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Abstract

The identification of a series of study sketches related to the possibilities imagined for new types of school buildings has become a pretext for recognizing the origin of a series of central topics in the research on the theme of the school that characterizes our time. By retracing the investigation conducted by Arrigo Arrighetti, a pioneer in translating the idea of the school as a small community in ways and with means that are familiar to us, we can trace a genealogy. The relationship between meaning and signifier, or rather between in-depth knowledge of the theme and its interpretation in the architectural project and its role, on a different scale, in the design of the city, leads to this reasoning, which becomes more precise and, from time to time, verifies itself through a series of projects which, from one level of education to another, re-discussing the relationship between the parts, decline the theme, increasing its complexity, until reaching the idea of the school as an integrated and integral part of a larger community.

Keywords

School community — Composition schemes — Typological research

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«I spent days breaking down and reassembling [...], I devised new rules of the game, I drew hundreds of schemes [...] I felt that the game made sense only if it was set up according to certain strict rules [...] suddenly, the idea flashed through my mind that I could try again in another way, simpler, quicker, more successful. I began again to compose schemes, to correct them, to complicate them: I got entangled again in this quicksand, I closed myself in a maniacal obsession» (Calvino 1973).

The sharing of narrative composition processes to which literature has sometimes accustomed its readers almost seems to be the underlying narrative in describing the collection of work notes ordered, with precision and care, in the envelopes of the Arrigo Arrighetti fund kept today in the Archivio Storico Civico del Castello Sforzesco in Milan; a series of reasonings in the form of words and diagrams traced on loose pages and catalogued by the architect himself as new *types of school buildings*.

A *maniacal obsession* with doing and redoing moves Arrighetti in the tension of an ever more precise agreement between the meaning of the theme of the school, which changes by its very nature, and the clarity of the signifier through which this theme is declined each time; a language, this system of meanings and signifiers, which interprets and narrates the structure of the facts.

Calculations and annotations, signs and numbers, matrices and grids regulate the arrangement of teaching groups defined by *pedagogical units and services* that are distinguished for the first time with this clarity into school services and city services. Recurring elements that sometimes intersect and contaminate, often connect, always recognize each other and that, just like notes, illustrate the statement of the *Final Report of the commission for the study of the typology of school buildings*<sup>1</sup> of which Arrighetti was a member<sup>2</sup>.

These reflections had to be placed in a developmental perspective; «foreseeing not only the future outlets of trends already in progress, but also to a certain extent promoting them through experimentation». Principles of a general nature that are capable of declining themes dear to the post-war debate and central to Arrighetti's own research.

A research, but above all an attitude towards research that recognizes, in the experiences that have preceded us, modernity in the interpretations and actuality in the way of verifying them yesterday as today through the different scales of the project.

At the date of these reasonings made of signs, Arrighetti had already completed his work at the Ufficio Tecnico del Comune di Milano, where, as *architetto condotto*, he had designed and built over fifteen new schools in just six years, between 1955 and 1961, some of which, studied and designed as prototypes, had been built in several examples.

Schools of every order and degree were distributed throughout the fabric of Milan, according to the *strict rules* of the urban planning of the new regulatory plans, in the best location, identified by interweaving demographic forecasts and density indices.

The Ufficio Tecnico, under the direction of Arrighetti, played a central role in the school issue, sharing its work during study days<sup>3</sup> dedicated to the subject and taking part in exhibitions<sup>4</sup>, occasions for comparison during which the state of the art of school building in Italy was illustrated through panels and scale models.

Arrighetti understood that the strength of a conscious and reliable study was the ability to «accumulate design experience and apply it into the projects to be drawn up» (Arrighetti 1961). For this reason, within the Ufficio Tecnico, he set up a *Ufficio Studi e Progetti Edilizi* in which the design was supported by a series of in-depth studies on the subject, and therefore «set up in such a way that the information and study part acquired a prominent value in the work. In other words, the material drafting of the drawings became the final act of a complete examination of all the data on the problem» (Arrighetti 1961).

This focus on in-depth knowledge of the subject was a specific feature that had given the Ufficio's work wide acclaim in the scientific community and was also followed with interest by the Ministero della Pubblica Istruzione which published some of the new projects as exercises in its *Quaderni*<sup>5</sup> edited by the *Centro Studi per l'edilizia e l'arredamento della scuola* directed by Ciro Cicconcelli<sup>6</sup>.

Arrigo Arrighetti was one of the first interpreters of this open dialogue between different disciplines, attempting to translate both the renewed pedagogical idea and the experiences of specialists in different fields into the most appropriate architecture, regretfully recognizing the missed opportunity to design new buildings for education even within the historical fabric of Milan, where schools «are buildings adapted for schools and the buildings built to serve as schools are now old, dilapidated and outdated». The concept of *school*, as taught by modern pedagogy, had completely changed. Knowledge and the acquisition of disciplinary norms were no longer imposed but conquered by children and young people, and the school environment played a primary role in this conquest.

«The architectural space of the school cannot be the same at all ages and in all places. [...] So the traditional school is gradually being replaced by a school which, instead of being made up of a series of classrooms and disengaged by corridors or porticoes, is

**Fig. 1**

Mostra dell'Edilizia Scolastica;  
Rome, 1956. ASC Fondo Arrigo  
Arrighetti, Scatola C, busta 35.

**Fig. 2**

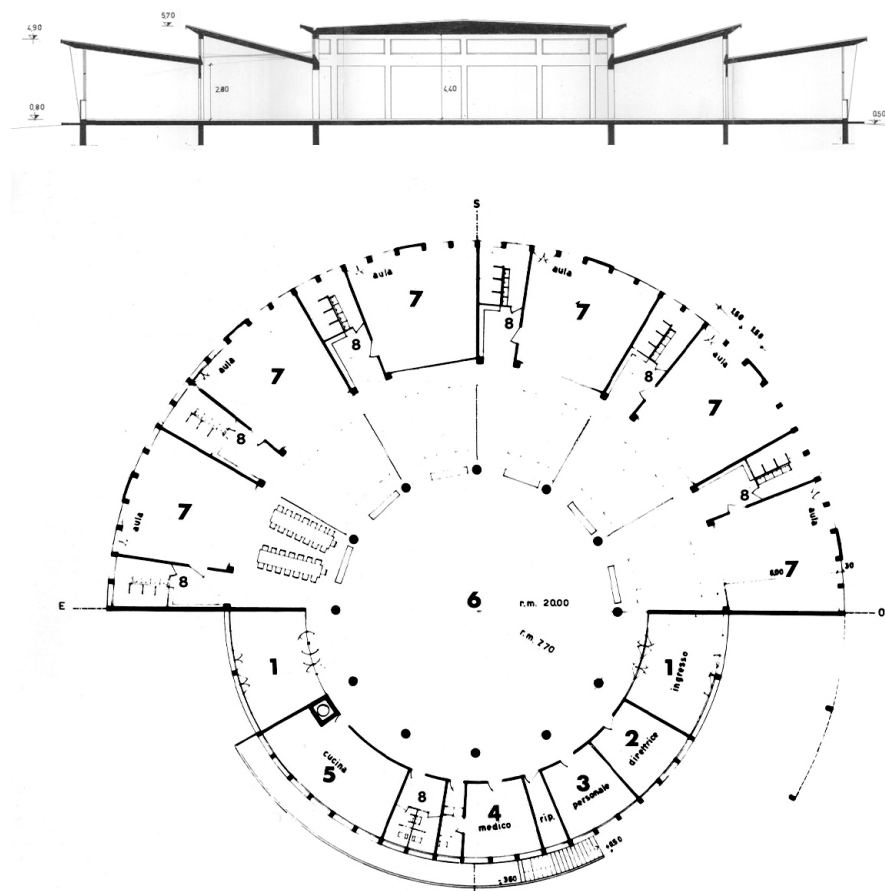
Exhibition in the context of Con-  
vegno sull'edilizia scolastica dei  
grandi centri urbani; Milan, ASC  
Fondo Arrigo Arrighetti, Scatola  
C, busta 85.



organized in *functional units*, each of which is almost self-sufficient, but united to the center of common life, to those environments, such as the auditorium, the library or the small theatre, which also serve the community. Just as a city is organized into families, neighborhoods, districts, so a school is organized into groups of pupils, classrooms comprising the various groups, functional units or districts, a set of functional units» (Cicconcelli 1958).

Thus, Arrighetti's investigation also starts from the idea of the school as a small community and becomes a community center «as a building that houses a basic institute of collective living» (Arrighetti 1957) and, from degree to degree, tackles the subject and interprets it, adding complexity. This tension towards the most fitting architectural translation already concerns the first degrees of education, the nursery school, which is «a small new world to discover. [...] a world made of light and color, of stones and blades of grass. Of elementary forms [...] as simple as the soul of a child» (Arrighetti 1956).

The first experience of collective living is variously interpreted by Arrighetti, but perhaps the principle that best corresponds to this idea of a small

**Fig. 3**

A. Arrighetti, Nursery school at Villapizzzone (1959). Section and plan.

1. entrance; 2. headmistress, 3. staff, 4. doctor, 5. kitchens, 6. activity room, 7. classrooms, 8. toilets.

Archivio del Comune di Milano, Cittadella degli Archivi

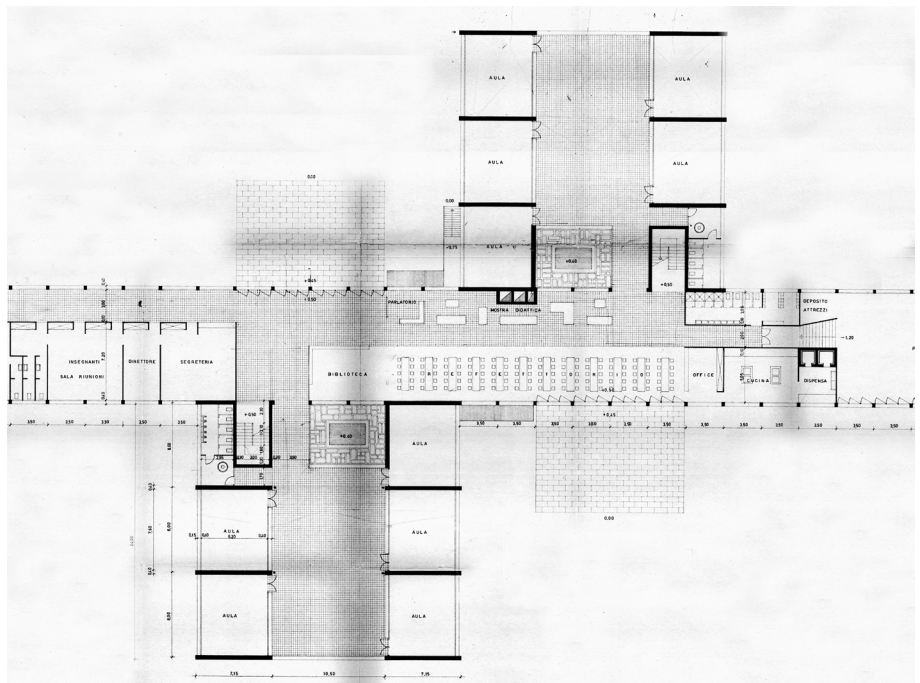
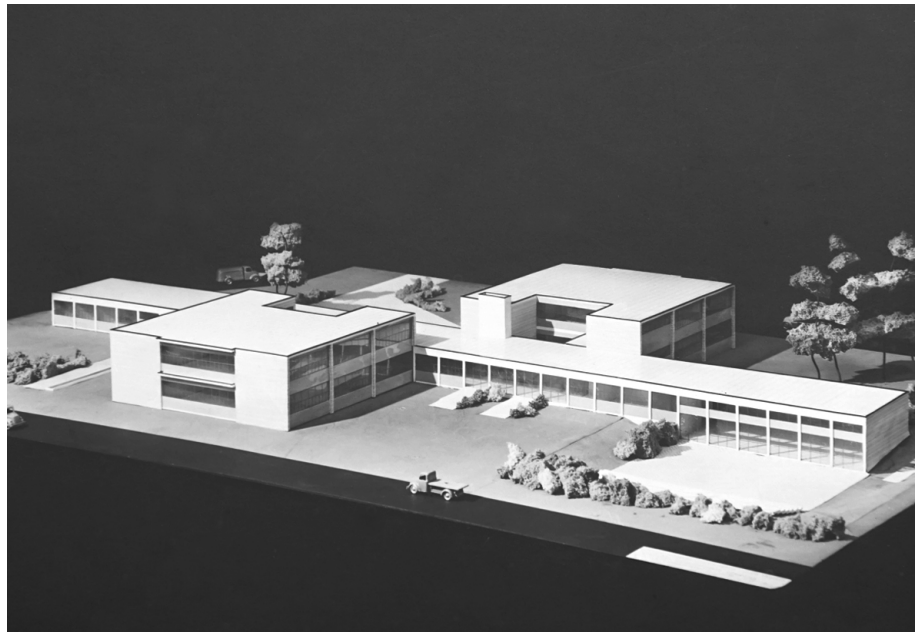
community is the one that can be recognized in the nursery schools imagined between 1957 and 1959<sup>7</sup>, which reflected on the theme of the central square around which the classrooms were arranged, small autonomous units.

In Villapizzzone (1959) the central, circular square, covered by a single roof supported by columns, is the place where the children's community used to gather and meet for collective activities. Six autonomous nuclei, each with its own cloakroom, which becomes an entrance and vestibule to the toilets, and a refectory space, which stands between the classroom unit and the central square, are arranged in a fan-shape and each opens out towards a portion of the garden, an open-air extension of the classroom space.

The gap between the space of the classrooms and that of the school services, where the more public part of the management and staff still coexists undivided with the more school-related part of the children's school, with the doctor's surgery and kitchens, is identified by the retreat of the covered but cold entrances which, by generating deep shadows, make them even more recognizable. They lead directly to the collective space from which the children, crossing the small tables in the lunch room, enter their actual classroom. The discontinuity of use is also identified and recognized by the size of the construction radius of the second semicircle, which can be read as a subtraction from the complete footprint on the ground of the circular sector whose size coincides with the size of the classroom – toilet block.

This geometric clarity is confirmed in the elevation, which identifies, through the different heights of the roofs, the higher square, the circular sector of the services and the south-facing sector of the classrooms, whose screening is entrusted to the succession of pillars, tapering downwards, which construct the façades, and to the generous overhang of the roof, which protects the full-height windows from direct light.

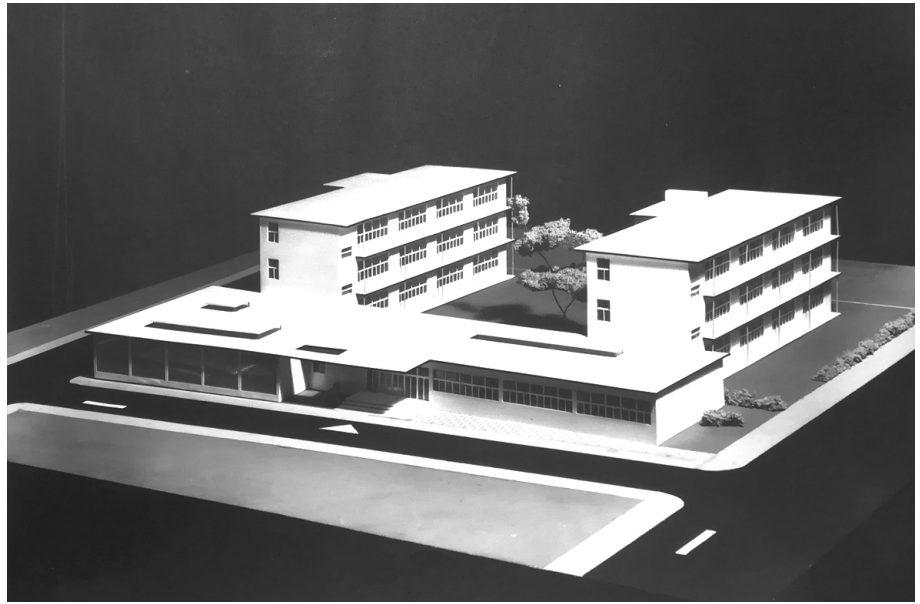


**Figg. 4 a-b**

A. Arrighetti, Primary school at Comasina district (1956) Study model. ASC Fondo Arrigo Arrighetti, Scatola C, busta 25.

But Arrighetti already had occasion to reflect on this idea of a *school-community* a few years earlier. In 1956, in fact, he had been called upon to oversee the design and construction of the nursery and primary school in the new self-sufficient Comasina neighborhood in the north of Milan.

The primary school imagined for the children of the district becomes itself a composition of *neighborhood units*. It is generated from the nucleus of the *school section* of five classrooms. Together with the toilet block, these classrooms define the size of the long side of the collective activity space where the children grow up together and share experiences, and which they all face, leaving the short sides free to let in light. The need to build four sections led to the idea of a two floors system which, mirrored and shifted by a span, clings together with its twin to a central spine, a street which not only distributes but contains the school's services in its linear body. Near the entrance we can recognize the administrative services, the medical clinic, an exhibition space and a small library used by the children. At the top, to the west, is the caretaker's accommodation, with its own ded-

**Fig. 5**

A Arrighetti, Middle school Carlo Porta, via Moisè Loira. First project study model.

ASC Fondo Arrigo Arrighetti, Scatola C, busta 28.

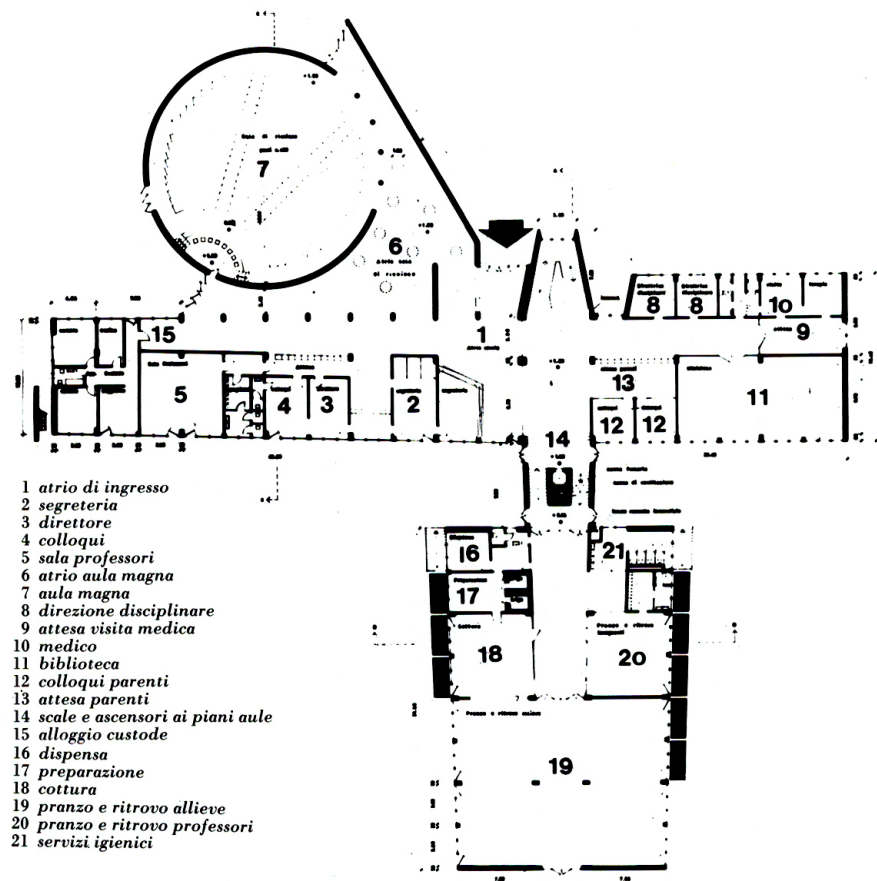
icated entrance, located in the portion closest to the residential part of the neighbourhood, while on the opposite side, towards the garden, is the gymnasium, adjacent to the cafeteria, which, following the slope of the land, descends to allow greater internal height and the roof to rest continuously. A pedestrian street separates the primary school from the nursery school, a small school district within the neighbourhood.

The same pedagogical idea is made more articulate by the increasing complexity of the higher level. The Carlo Porta middle school (1958) in Via Moisè Loira is an expression of similar reasoning and solutions, with particular attention paid to the spaces for study and collective work between pupils and teachers and the services, still linked to the exclusive use of the school, but which seek in their disposition a relationship with the city. In fact, even more strongly than in the initial project, the gymnasium, reaching out to the edge of the block, seems almost to elect itself as a place for the public, unlike the other parts which, set back, declare themselves related to the school.

The idea of *neighbourhood unity* remains in both projects, consisting of three classrooms in sequence, distributed by a single path culminating in the collective classroom facing the garden, and arranged in two blocks of three floors each.

The north-facing loggias of the first project are replaced by a system of projecting brise soleil placed one third of the way up the window openings, to the south, allowing two different types of light to enter. Attention to the theme of natural light inside the school building and the use of architectural expedients to regulate it had been explored in those years during the design of the primary school for children suffering from amblyopia (1955), which had led Arrighetti to investigate this theme with specialists and to build not only specific furnishings but also 1:1 scale models of the classroom space, verifying and evaluating the most suitable solutions together with the doctors. These dialogues had evidently become the basis for many subsequent experiences.

In the case of the *Special School*, it was not the idea of community that drove the typological research and the choices of the project but the strong need to guarantee *the right to education for all* and, using medical knowledge and the tools of architecture, to build the best possible space for learning.

**Fig. 6**

A. Arrighetti, Civica Scuola Alessandro Manzoni, 1958. Ground floor plan.

And this same idea of *education for all* is also the basis of the project that is perhaps more complex and certainly closer to contemporary thinking on the idea of the role of the school in the city as an active body, one of the premises set out in points in the commission's report.

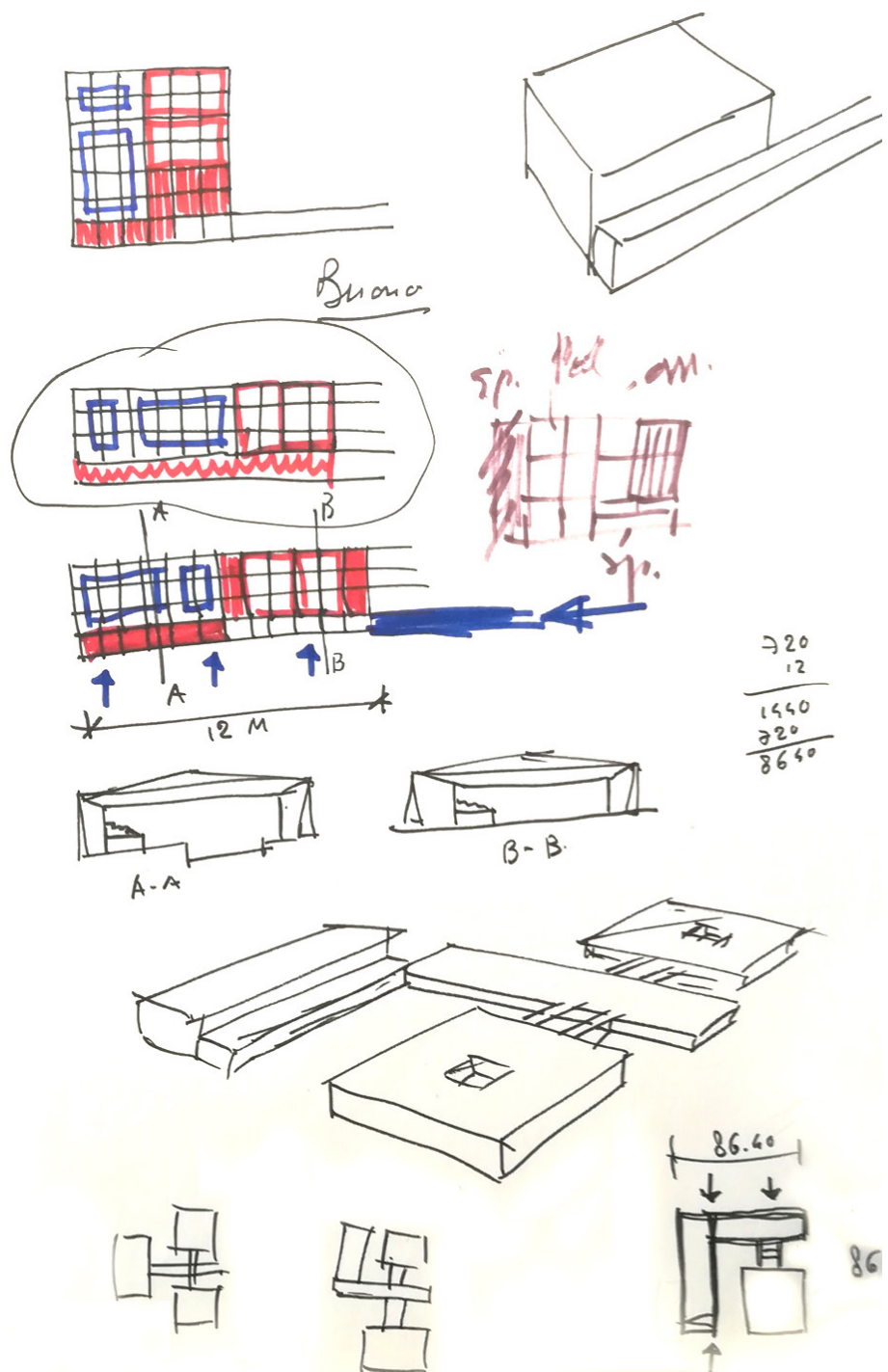
Secondary education for girls, conceived in a modern spirit as early as 1861, had led to the establishment of the '*Alessandro Manzoni*' Civic School, which had never had its own site. Having identified a site near Parco Ravizza, south of Milan, the school, planned in all its parts, was *soon to be started* but never built due to the change of use of the chosen land.

The longitudinal block of classrooms, which would have occupied three of the four floors of the project, would have been transversally intercepted by the axis along which the entrance, the distribution on the upper floors and the cafeteria were arranged, stretching out towards the park. Near the entrance we could recognize the circular main hall, an auditorium facing the city, which was just as modern, with dedicated entrances that would allow it to be used even during out-of-school hours.

Looking back at these projects, it seems clear that the civic role of the school, or of some parts of it, is the denominator that unites the latest shared experiences that become the seed for the thoughts collected in these notes. If, on the one hand, Arrighetti became a model of a precise and cultured way of working whose depth is unquestionable, on the other, his research gave a strong direction to all subsequent research in which it is not difficult to trace the matrix.

Interweaving the built and unbuilt projects, we can read the continuous dialogue between meanings and signifiers pursued, between theme and its interpretation, exchange of knowledge between disciplines and translations into architecture. A dialectic that is encouraged by questioning choices, by starting again, but not from the beginning, to compose *schemes*, to



**Fig. 7**

A. Arrighetti, Study sketches for new types of school buildings. ASC Fondo Arrigo Arrighetti, Scatola B, busta 47.

*correct them, to complicate them, even and above all after verifying them in construction.*

Arrighetti outlines the data on the *school problem* from a perspective in which our time is still immersed.

Even today, we are questioning the meaning of the classroom – assuming its existence is still considered – and the relationship between this elected place for learning and all those annexed to it, as well as the place that makes them accessible. Even the most contemporary experiences, developed through the comparison between disciplines, first and foremost pedagogy, consider the possibility of contaminating the parts. This latter aspect can be seen in all the experiences that have been reinterpreted in this context and which, at the time, were really experiments to be verified.



These are unfinished structures dominated by increasing schemes according to models that arrange constant, recognizable, familiar elements and alternate flexible parts with parts that are not, parts dedicated more specifically to the education of learners and public and collective parts for the school, some of which are also open to the city. The school districts then become a system of places that are recognizable by their very arrangement of the parts and by their volume are recognized as collective places for the city.

It is in these experiences, therefore, that specificity is developed in the relationship between the school and the city, both in terms of the social role it plays and the urban design it defines.

This is a lesson that can be found in recent times, at least as an open question, both in the results of the competitions promoted by the Ministero dell'Istruzione or by individual municipalities on this theme, and, more strongly, in the experiences of certain realities, such as the South Tyrol one, which has turned this theme into a laboratory for experimentation.

In this interpretation of the school as a pedagogical and socially constructed idea Arrighetti's work is certainly a forerunner.

Arrighetti, passing on the baton, leaves us, like many others, one of the most important teachings, that stoic attitude according to which a fool is he who always starts over and refuses to continuously unravel the thread of his experience<sup>8</sup>.

## Notes

<sup>1</sup> *Relazione finale della commissione per lo studio della tipologia degli edifici scolastici previsti nel piano di edilizia scolastica per il quadriennio 1972/1975*, ACS

<sup>2</sup> Arrighetti became a member of numerous commissions, committees and working groups. The result would be the drafting of a final report by the commission for the study of the typology of school buildings in the school building plan for the four-year period 1972/1975.

<sup>3</sup> See *Convegno dell'Edilizia scolastica dei grandi centri urbani*, Milan 8-9-10 March 1956 see Atti del Convegno edited by Ermete Monti, Tamburini, Milan 1956

<sup>4</sup> See Exhibitions include the *Mostra dell'edilizia scolastica dei grandi centri urbani*, Milan 1956 and *Mostra dell'Edilizia Scolastica*, Rome 1963, Palazzo delle Esposizioni

<sup>5</sup> See *L'Edilizia della scuola Elementare*, Quaderni, edited by Centro Studi, Le Monnier, Florence 1960. In the introduction, the Ministro della Pubblica Istruzione Giacinto Bosco emphasized what was expected from these notebooks, namely «a new, valid tool to enable the construction of school buildings that meet the dictates of the latest pedagogy, but are also more intimately and harmoniously sensitive to the needs of a modern school in modern life». The nursery and primary school of twenty classrooms in the Comasina district (pp.176-183) and the primary school of twenty-four classrooms for the Baggio district (pp. 184-189) were published.

<sup>6</sup> The Centro Studi was set up in 1952 and was made up of architects, pedagogues, doctors and administrators with the aim of defining the new characteristics of school building in Italy during the reconstruction period, seeking a close link with the principles of the modern pedagogical approach.

<sup>7</sup> See Scuola Santa Croce (1957) and its twin in Via Valvassori Peroni.

<sup>8</sup> See A.Rossi, *Architettura per i musei*, at IUAV, AA:1965-1966.

## References

- ALOI G. (1960) – *Scuole*. Hoepli, Milan
- ARRIGHETTI A. (1957) – “Edilizia scolastica milanese nel quadro urbanistico”. In: *Volume in onore di Cesare Chiodi*. Giuffrè editore, Milan.
- ARRIGHETTI A. (1956) – “Scuola Materna a Milano”. *Edilizia Moderna*, 58 (August) .
- ARRIGHETTI A. (1961) – “6 anni di attività dell’Ufficio Studi e Progetti Edilizi”. In: *Città di Milano*. Milan.
- BODINO C. (edited by) (1990) – *Arrigo Arrighetti architetto*, Archivio Storico Civico, Milan.
- CALVINO I. (1973) – *Il castello dei destini incrociati*. Einaudi, Turin.
- CICCONCELLI C. (1958) – “Scuole Materne, elementari e secondarie” In: CARBONARA P., *Architettura pratica, volume terzo, Composizione degli edifici. Sezione 7ª - Gli edifici per l’istruzione e la cultura*. Unione tipografico – Editrice Torinese, Turin.
- MINISTERO DELLA PUBBLICA ISTRUZIONE (edited by) – *Quaderni del centro studi per l’edilizia scolastica*. L’arte della stampa, Florence.
- MONTI E. (1956) – *Atti del Convegno*. Tamburini, Milan.
- ROSSI A. (1965) – “Architettura per i musei”. In: Bonicalzi R.(edited by) – *Aldo Rossi. Scritti scelti per l’architettura e la città*. Quodlibet, Fermo.

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