

Caterina Barioglio, Daniele Campobenedetto*

The school as a model.**Two experimental urban school buildings in Turin, 1968-75**

Abstract

The heritage of school buildings constructed in the 1970s in Turin is one of the most interesting infrastructures of the public city in terms of extension and capillary diffusion across the urban fabric. The school buildings erected in the expansion areas envisioned by the Popular Affordable Housing Plans, which underwent great demographic changes in the last ten years, can be considered a resource for the present-day city. Through archive documents and the analysis of the relationship between built space and teaching styles, the present article explores this theme by looking at two schools in Turin, both of which were taken, at the time of their construction, as models of the relationship between built space and didactics.

Keywords

School buildings — Urban design — Turin

Introduction: a heritage under discussion

The city of Turin has been a laboratory for school building throughout the twentieth century (Deambrosis and De Magistris 2018; D'Amico 2010). In particular, the 1970s were characterised by a significant increase in the number of schools built within the city borders¹. Those were transitional years in which national financing laws and regulatory innovations intertwined with local programmes in the construction of school buildings. In the following period, educational experimentation, already under discussion since the post-war years, was translated into built space through numerous opportunities for urban transformation.

Most of the buildings erected in this phase were designed by the City's technical offices and belong to ordinary architecture which has received marginal attention in architectural criticism and in the history of Italian schools.

This heritage, however, takes on particular relevance in the contemporary debate on the future of the City of Turin. Demographic contraction (Giorgio Rota 2020 report, chap.1), an ageing population (Vero 2019), and potential investment in the public heritage² all meet on the grounds of the “belt city” (Di Biagi 2008): its study is therefore relevant for future developments in Turin's urban transformation.

The areas established in Turin, as well as in other Italian cities, as a result of Law n.167 of 1962 and developed through the Popular Affordable Housing Plans (PEEP), are one of the main ways in which this belt city has been transformed over time; these areas provided the opportunity for the construction of school buildings designed to serve the growing communities at that time. This heritage is today largely affected by degradation and

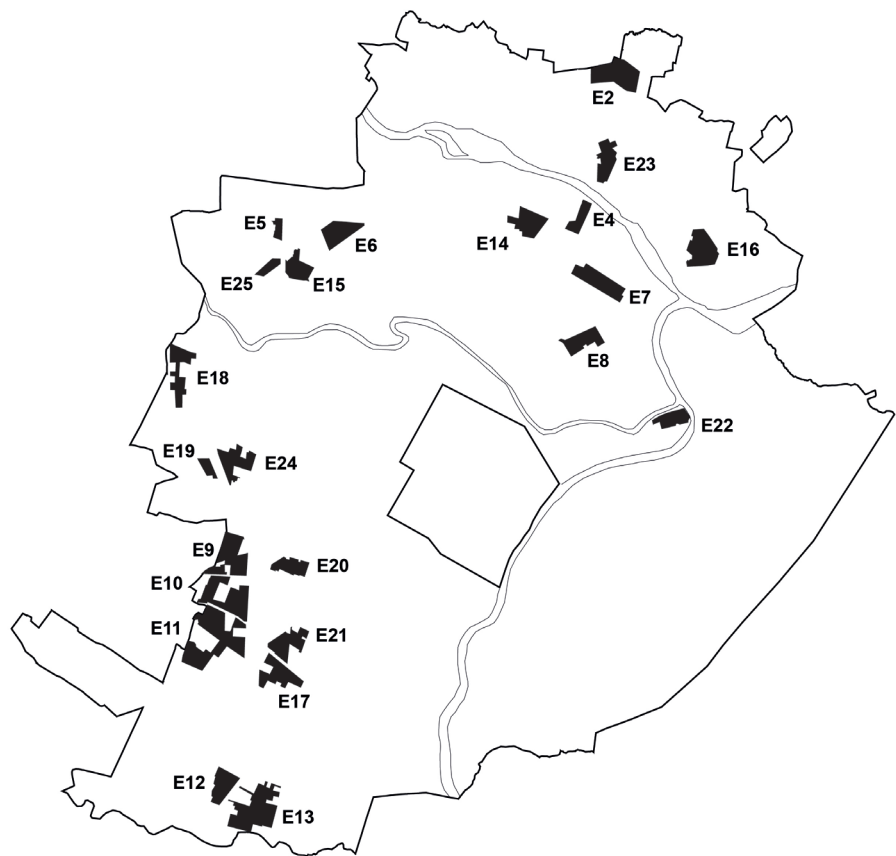


Fig. 1

Location of the expansion areas within the municipality of Turin, approved in 1963 so as to be developed according to Law n.167 of 1962. Authors' drawing.

decommissioning but, if considered as a whole, it is an important part of Turin's school infrastructure, and one of the most widely spread in the city.

School buildings in Law 167 areas

Law n.167 of 1962, *Disposizioni per favorire l'acquisizione di aree fabbricabili per l'edilizia economica e popolare* (Provisions to favour the acquisition of building land for affordable and social housing), played a key role in the expansion of Turin and of other major Italian cities between the 1960s and the 1970s (De Pieri 2015; Di Biagi 2008). The law provided regulatory tools to promote the acquisition of land at affordable prices and to encourage the construction of residential buildings and services for the less affluent segments of the population. The implementation plan (PEEP) drawn up for Turin in 1963 identified 24 areas for new construction works³, distributed in a fragmentary manner and arranged around the city's perimeter (Frisa 1974). Partly because of their decentralised location, the PEEP or "expansion" areas were designed as self-sufficient urban islands, equipped, on paper, with the main basic services for their inhabitants⁴. The neighbourhoods of the "public city" resulting from Law No. 167 are still easily identifiable and recognisable today: unrelated to the traditional forms of the consolidated city, they are distinguished by designs that are for the most part continuous and homogeneous (Di Biagi 2008). The formal coherence of the areas is not, however, the result of a synchronous

realisation. The history of law n.167 in Turin, in fact, did not end with the PEEP of 1963, but continued in a long implementation cycle until the approval of the new local master plan in 1995 (De Pieri 2013). The planning of these areas was therefore the result of a non-linear transformation process that lasted over thirty years, in which residential buildings and structures for various services followed largely independent construction paths. In 1967, inquiries into the progress of the works, a few years after the PEEP was drawn up, already described the disconnection between housing and services construction sites: in the areas that had already been partly built on or assigned, the service infrastructure building process was undergoing substantial delays, and the realisation of schools was not expected anywhere in the short term (Bastianini 1967).

To understand the reasons for this delay it is necessary to consider the development of school building policies in those years. The schools included in the area plans were in fact part of the municipal school building programme, and therefore followed a planning and financing process that was parallel to and independent of residential building.

In the late 1960s, it was state funding that sped up the planning of school buildings⁵: starting in 1968, the City of Turin drew up two programmes (one for the three-year period 1968-1971 and one for 1972-75) for the construction of new schools where they were most needed, particularly in the areas identified by the PEEP. To date there are 52 school buildings located in the expansion areas⁶: of these, only one was built before 1969, while over 80% were designed and built between 1970 and 1979, within the framework of the two municipal programmes.

If we compare the forms of the buildings with the first indications given in the detailed plans of 1963, this gap is evident: the urban form and distribution of the residential buildings was largely unchanged; on the contrary, as for the buildings intended for services – including schools – the architectural projects present forms and distributions that differ from the 1963 plans, whose building outlines still referred to Turin as it was in the 1960s (Città di Torino, 1962).

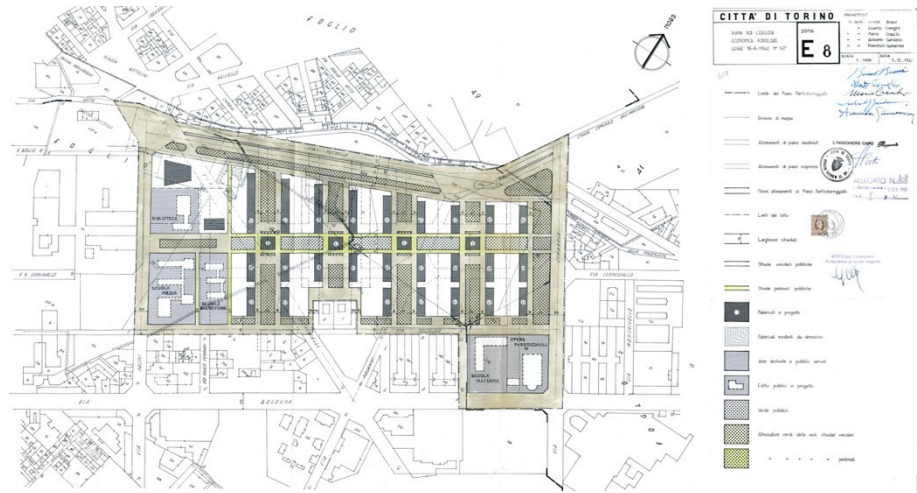
On the one hand, the schools in the areas outlined by Law n.167 resulted from the intersection between the expansion of the city belt and public policies attempting to respond to the demand for educational spaces. On the other hand, they were also the first practical translations of the national debate on the relationship between space and pedagogy that had been ongoing since the post-war period. The early 1970s were characterised by the reform of the technical standards for school buildings, formally approved in 1975, but already drafted in the early years of the decade (Leschiutta 1970).

In Turin, these experimental guidelines were translated on several fronts into building practice.

A first front concerns urban transformation processes: architecture contests and interdisciplinary working groups between designers and pedagogists resulted in the creation of experimental schools, based on the search for an integration model between space and the educational dimension. These were often the object of attention from architectural critics⁷. At the same time, the municipality's technical departments were called upon to respond to an ever-increasing demand for classrooms by initiating the design of affordable and repeatable models of school buildings.

A second front concerns the forms through which these experiments were translated into architecture. On the one hand, schools were designed to respond to a specific educational need, accommodating, for example, a

Popular Affordable Housing Plan (PEEP), Law 18-4-1962 n. 1967. Zone E10. Historical Archives of the City of Turin. By permission of the Historical Archives of the City of Turin.



Popular Affordable Housing Plan (PEEP), Law 18-4-1962 n. 1967. Zone E8. Historical Archives of the City of Turin. By permission of the Historical Archives of the City of Turin.



single grade of school; on the other, projects were drawn up for large platforms capable of responding to the demand for public services in an entire neighbourhood.

Looking at the arrangement of these school models in the PEEP areas, it is possible to identify two recurrent settlement types. In most areas what is found is a “city of services”: a set of buildings each of which is destined to a specific function and dedicated to a specific group of users, scattered in a green area; a few cases, on the other hand, consist of a “city-buildings”, designed as centres capable of gathering services considered essential for the neighbourhood.

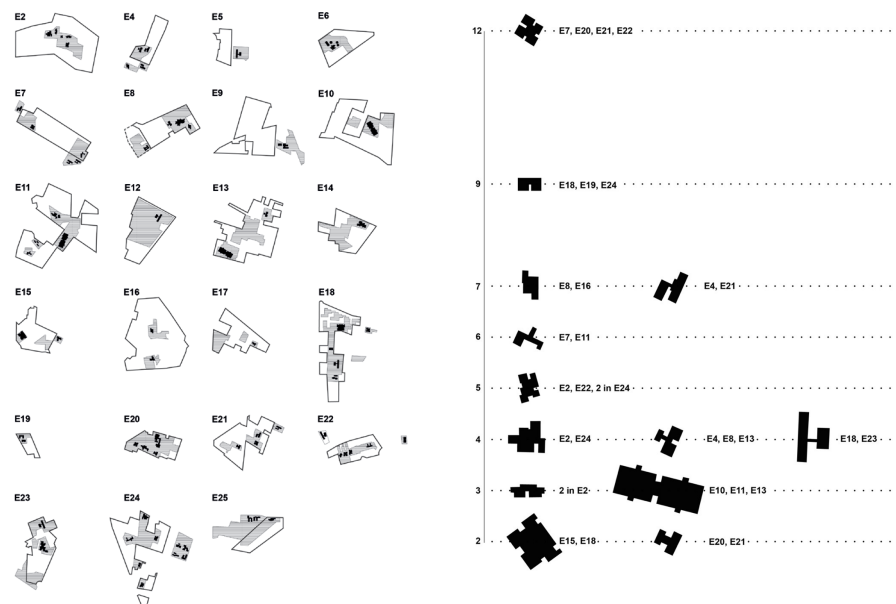
Among these city-buildings, two cases represent diametrically opposed models of school building, both relevant to the construction of scholastic infrastructure in Turin. One of these cases is the school in zone E8, named after Salvo D'Acquisto: it was the result of an architectural contest, conceived as a unique instance of experimentation on the relationship between the articulation of spaces and educational objectives. The three schools built in areas E10, E11, E13 are twin buildings conceived as a single project, based on the search for reiterable models that characterised the City of Turin's response to the shortage of educational spaces.

Fig. 4

Schematic overviews of the expansion areas. Areas dedicated to public services and completed school buildings are highlighted. Authors' drawing.

Fig. 5

School models and their frequency of realisation inside and outside the expansion areas. The Y axis shows the frequency of cases constructed within the municipal territory. Authors' drawing.



These two projects, despite substantial differences in terms of process, approach and actors involved, are both the result of an attempt to translate into architectural distribution the openness to the city, the homogeneous conception of the architectural organism and the overcoming of the centrality of the classroom, subsequently expressed in the 1975 technical standards for school buildings⁸.

Two projects for four schools

The story of what was to become the school of the E8 expansion zone began in 1968, when the City of Turin, accepting the proposal of a group of pedagogists⁹, included the construction of an experimental full-time primary school in its school building programmes. The project, signed by a group of architects from Turin¹⁰, had originally been submitted for the contest for a school in zone E6. Although the project did not win the competition, it was judged to be of particular pedagogical interest by the administration, which proposed building it in an area outside the E6 expansion zone¹¹. In 1970, a search was made for a larger area with plenty of green space for the school «so as not to compromise the effectiveness of an initiative which, because of its intrinsic value, deserves an exemplary solution in every aspect»¹², and the choice fell on the E8 expansion zone¹³. The school project had aroused much controversy within the City Council. Building an experimental school in a single unit, with high construction costs and extraordinary equipment (including two swimming pools) for just over 20 classrooms, contradicted the administration's declared urgent need to respond to the lack of space for teaching activities¹⁴. «Faced with a family that has many shoeless daughters, we take one of them and dress her up in Christian Dior», was one of the comments on this issue¹⁵.

The project seemed anomalous in relation to the guidelines laid down by the administration through the two school building programmes of the early 1970s, which aimed to identify models of affordable and repeatable school buildings. The school complex in via Romita, in the E10 zone, is an example, albeit an exceptional one, of the logic expressed by these programs: the project was developed from the outset as a model to be replicated in different areas of Turin. Designed by the technical offices of the City of Turin¹⁶ in 1973 and built between 1974 and 1975, this building is the

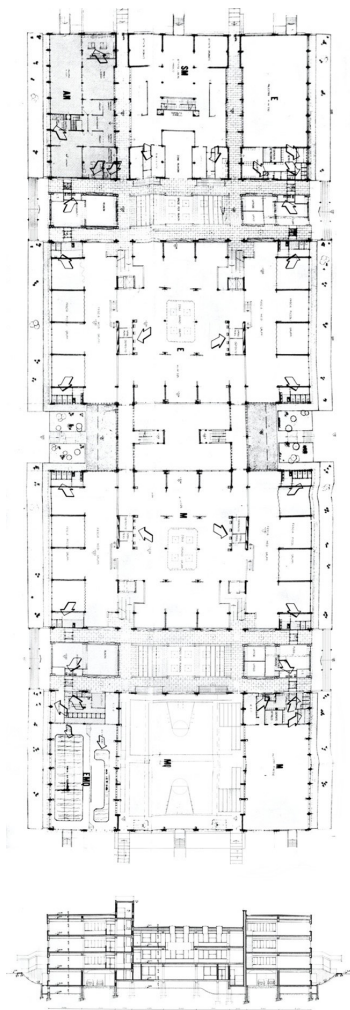


Fig. 6
School E10. Ground floor plan and section. Archive of the school building area – technical services division of the City of Turin.

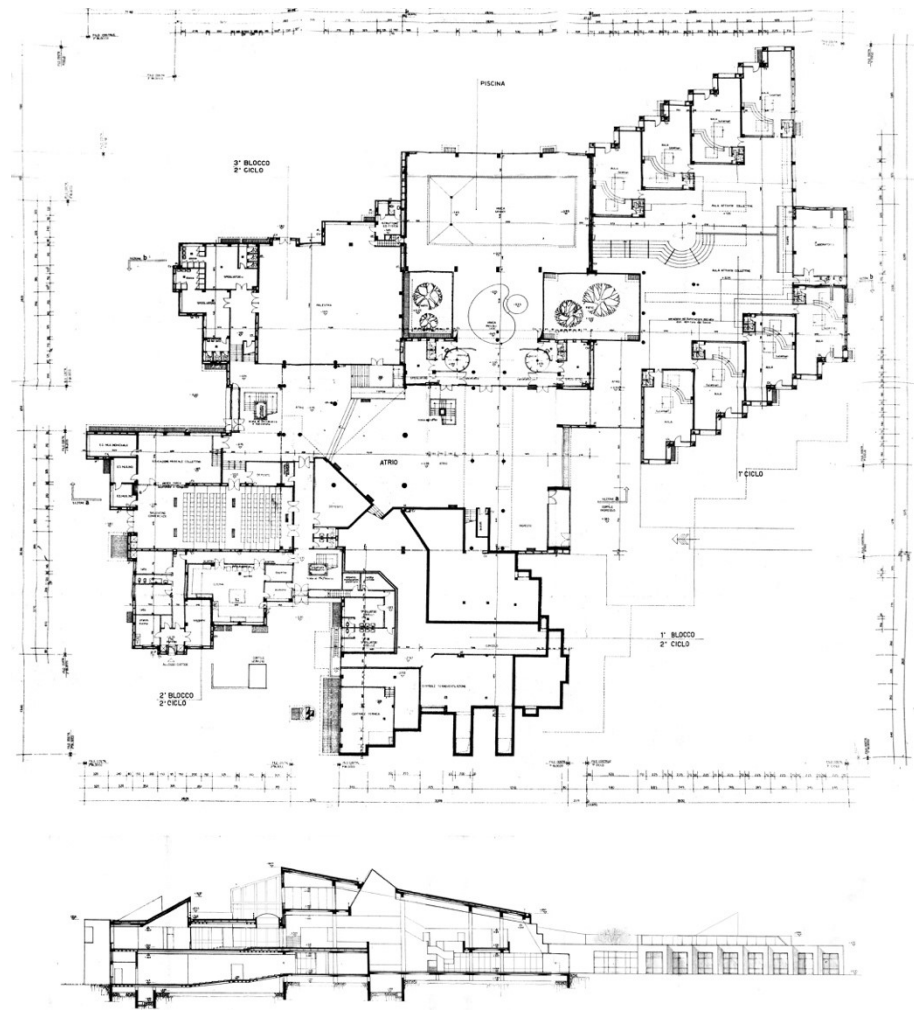


Fig. 7
School E8. Ground floor plan and cross section. Historical Archives of the City of Turin. By permission of the Historical Archives of the City of Turin.

first of three twin examples, all designed in the first half of the 1970s within expansion zones to address the lack of services in the neighbourhood¹⁷. The school is designed as a civic centre, in response to the conclusions expressed by administrators, pedagogues and technicians when examining the projects submitted to the national competition held in 1971 by the City for the construction of the Corso Vercelli school complex¹⁸.

The building consists of four blocks: the two outer blocks include a kindergarten, a nursery school and a gym on one side, and sports facilities on the other, dedicated both to the schools housed in the building and to the people of the neighbourhood. The two central blocks house the primary and secondary schools with a capacity for 1,500 pupils.

An urban question

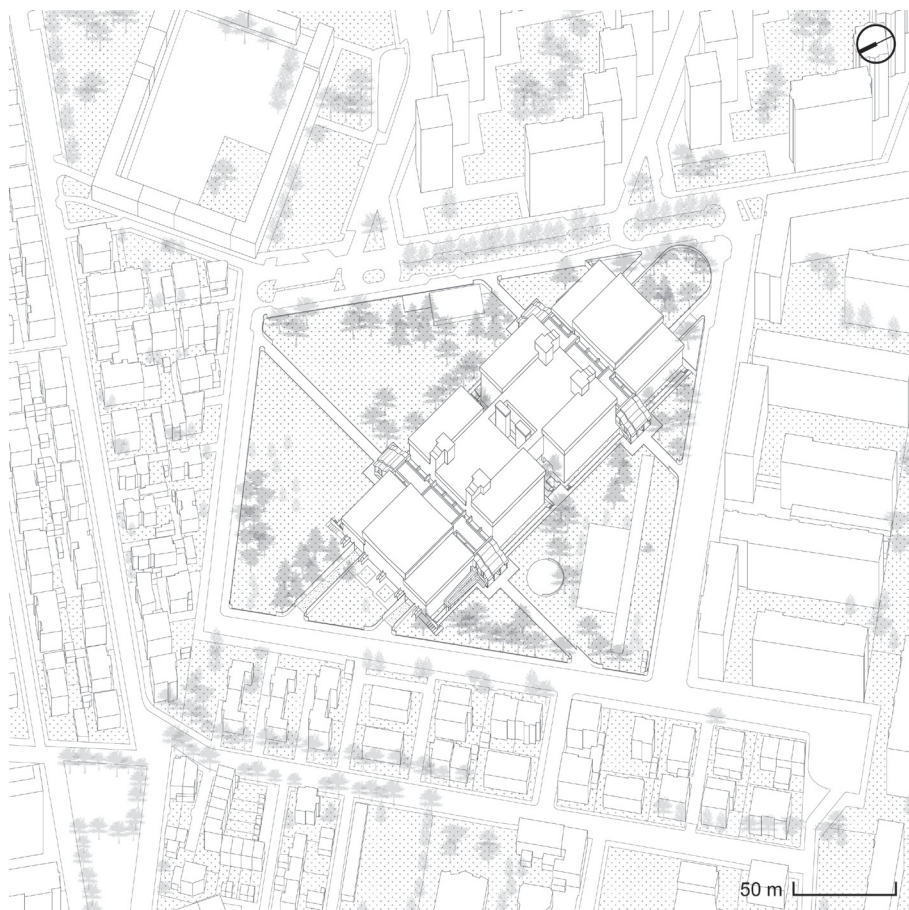
Both schools were designed as integral parts of the city. The school building, as a public work, was intended as an opportunity to strengthen the link between the scholastic institution and the neighbourhood.

School E8's facilities – including a swimming pool, an auditorium, and dedicated spaces for activities such as photography, printing, listening to and performing music – are the spatial translation of a social programme, aimed at young people and adults, that goes beyond traditional educational activities and class time.

A similar concept of space can be found in the E10 school, designed to bring together in a single structure the spaces needed for school activities and those required for the social and sports activities of the entire neighbourhood¹⁹.

Fig. 8 a-b

The relationship of schools E8 and E10 with the urban context.
Authors' drawing.



In addition to extending access to the school's large facilities – in particular the gym and the swimming pool – to external users, there are spaces reserved exclusively for neighbourhood activities: these are small spaces in the basement, with little natural light, directly accessible from outside the school perimeter by means of two driveways that cross the lot longitudinally.

The school as a distribution building

The internal organisation of the two schools reflects two different models of understanding the relationship between space and educational experience.

School E8 is articulated through spaces that have a clear function, such as the twenty classrooms, and spaces that are functionally ambiguous, designed to encourage pupil autonomy and the performance of activities in groups of varying size. Teaching activities are organised in five blocks of classrooms, two blocks for the primary school and three blocks for the secondary school, arranged at different heights and gathered around a central core that houses the spaces for group activities.

Each block of classrooms is distributed around a common area that can accommodate organised activities for large groups. The staggered height of each block is designed to allow autonomy of use with respect to the height of the atrium, while maintaining the visual continuity of the entire school environment.

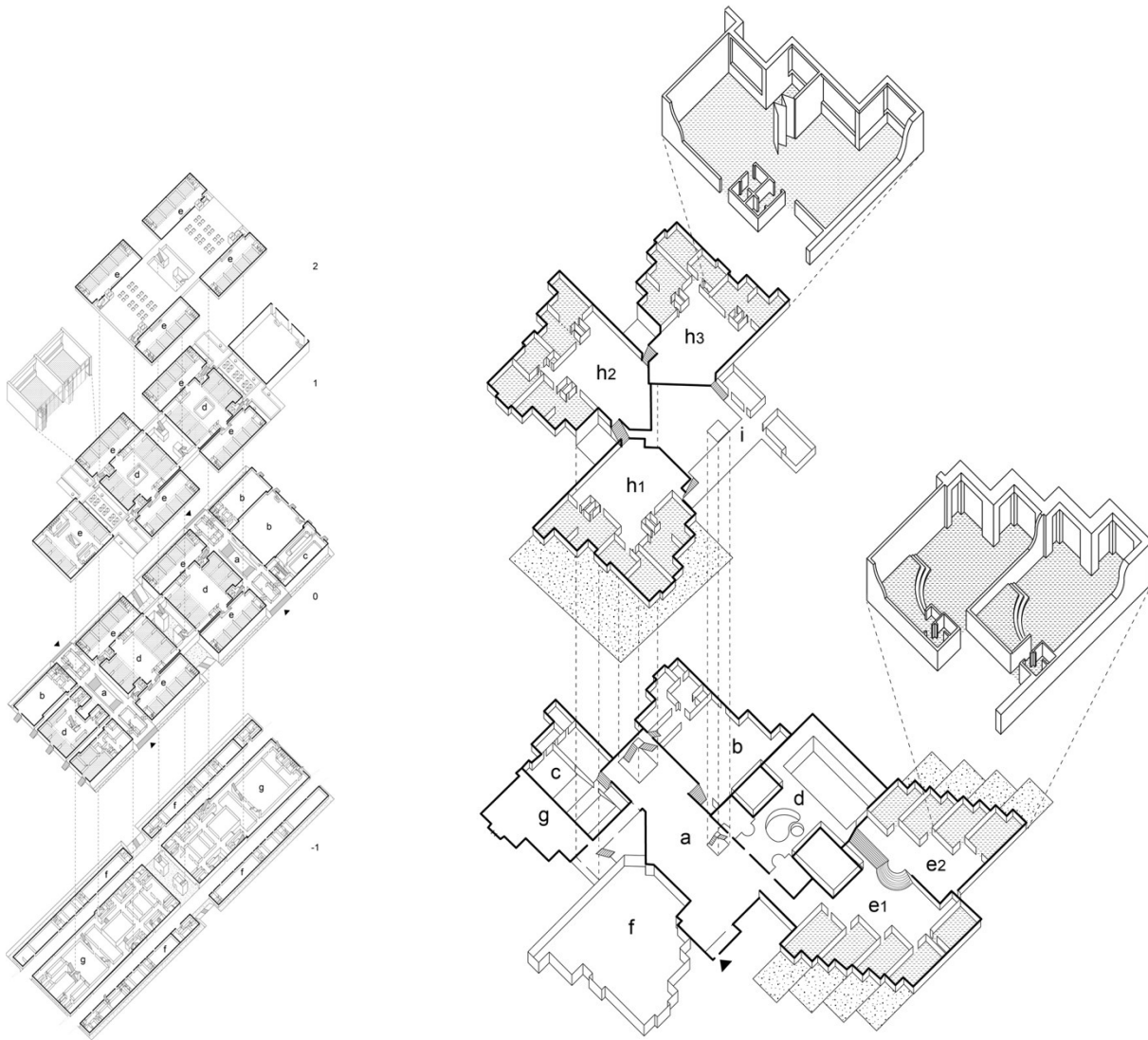
The two central bodies of the E10 school building are also organised to accommodate activities in different group sizes. At the edges of the block one finds classrooms for small groups (today used as ordinary classrooms). These open up to distributive spaces for educational activities involving medium-sized groups. On the ground and first floor there are two central spaces, on a slightly raised level and in communication with each other, dedicated to large group activities. This central space is designed to be subdivided, if needed, thanks to the installation of movable walls that run along the structural mesh of the building.

The visual continuity and functional ambiguity of school E8 are not found in the distribution of school E10, where the different sets of rooms are always visually separated from each other. Moreover, while in school E8 there are significant differences between the blocks of classrooms dedicated to the primary school and those dedicated to the secondary school, in school E10 the spaces dedicated to the two grades are articulated identically.

The open classroom

In both schools, the classroom was seen as the testing ground for the relationship between built space and educational models as it emerged from the debate of the 1960s. In both buildings, classrooms open up to the other school areas, becoming part of a continuous and flexible learning space able to adapt to different educational experiences.

However, in the two cases analysed, the principles of openness and flexibility are translated into different spatial solutions. In the continuous space of school E8, classrooms are designed as devices integrated in the single block, but equipped in such a way as to have substantial autonomy: each classroom has its own toilets and those of the primary school feature a small stage. The continuity of spaces is also ensured between the interior and the exterior of the building: in particular, the classrooms of the primary school have a courtyard which acts as a filter with respect to the green spaces destined for collective use.

**Fig. 9**

Layout of school E10. a: atrium; b: gym; c: swimming pool; d: rooms for large groups; e: primary and secondary school units; f: rooms dedicated to neighbourhood activities; g: technical services, canteens and kitchens. Authors' drawing.

Fig. 10

Distribution scheme of school E8. a: atrium; b: gym; c: auditorium; d: swimming pool; e: primary school units; f: technical services; g: caretaker's house; h: secondary school units; i: library. Authors' drawing.

The principle of flexibility is translated into spatial devices: internal vertical walls that can be used as retractable blackboards, or secondary school classrooms separated by movable panels which can be made communicating to allow for different activities. However, the flexibility of spaces is not understood as total transformability, but rather as the intrinsic ability of their distribution to accommodate diversified teaching experiences.

The principles of openness and flexibility are translated very differently in school E10: the classrooms are all equipped with a movable partition wall which allows them to open up to the distribution space dedicated to medium group activities. In spite of the high flexibility of the environments, which guarantees continuity between the classroom and the distributive spaces, this continuity is not maintained in the relationship between inside and outside, which are designed as separate and autonomous environments.

Conclusions (or the storytelling of an infrastructure)

The areas identified as a result of Law 167 of 1962 have been the site of heritage expansion and experimentation with models for school building in Turin. This heritage, built mainly in the 1970s, is now at risk of abandonment and deterioration due to economic and demographic changes, as well as the obsolescence of the structures.

The analysis of the two schools in the E8 and E10 zones offers some keys to interpreting one of the most prolific construction periods in Turin's school

infrastructure. The two schools are emblematic cases of the degradation of a significant part of this heritage: the first is now abandoned, while the second is the subject of continuous technical and distributional adaptations. In addition, the two schools represent the *mise en espace* of diametrically opposed transformation processes. In the context of Turin, these buildings can be taken as the paradigms of two model-schools – in the first case as a single structure, in the second as a series – which attempted to respond, through the articulation of spaces, to the issues formalised by the 1975 school building regulations.

The contemporary usage practices of these buildings reflect the disconnection between the distribution, construction and regulatory tools used by planners and administrators and the stresses placed on the school infrastructure by the transformation of both the city and teaching culture. In school E10, the spaces for the activities aimed at the neighbourhood have been abandoned and the sports facilities cannot be shared with external users; the central spaces of the school buildings, originally intended for large group activities, are now used as administrative offices; the movable partitions between classrooms and connective spaces, designed to ensure flexibility of use, have been removed because they no longer meet the requirements of current safety regulations. The school in zone E8, on the other hand, was progressively declared unfit for use between 2012 and 2018, partly as a result of difficulties in the management and maintenance of its sports facilities.

The weaknesses of these buildings – particularly in terms of adapting to changes in teaching models and increasingly stringent regulatory requirements – and the potential of their spaces, such as large connective environments or green areas, exemplify a widespread condition in the city's school heritage.

The urban dimension of this heritage implies the need to address these weaknesses and potential on a scale that goes beyond individual buildings. Describing the infrastructure not only through maps – usually taken from the point of view of planning – or single cases, but also by connecting the urban scale to the architectural scale through the study of models, appears to be a promising way to intervene on these structures as a whole.

The weaknesses and, above all, the potential that can only be recorded through a study of the architectural models can thus be considered in their territorial dimension and provide a useful description of this heritage. Perhaps this will help to address the issues mentioned in the introduction with non-standard strategies. The need for safety and increased energy performance in Turin's school infrastructure, as well as the need for distributional innovations with pedagogical objectives, is evident. In this context, the stories of schools E10 and E8 can be interpreted not only as the spatialisation of policies and teaching models of a key period in the architectural culture of Turin's school buildings, but also as the description of the elements necessary to understand the transformation potential of an infrastructure widely distributed throughout the city.

In order to be understood, valued and, where appropriate, used, this infrastructure seems to require narratives able to convey its complexity.

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Notes

¹ Of approximately 270 public school buildings in use today, about a third were built between 1970 and 1979. Data from Piedmont Region's school building register (EDISCO Piemonte) and the technical cartography of the City of Turin.

² In particular, we refer to the Next Generation Europe funds, whose allocation plan is currently (April 2021) being drafted.

³ The 24 areas of the PEEP were identified in 1963 and approved by the City Council that same year. In the following years, zone E3 was removed from the plan and replaced by a new zone called E25. Zones E12 and E20 were removed on the occasion of the "services variant" of the PRG (17/1974). The E1 zone was never implemented, see Vignuolo 2013.

⁴ In Turin, these basic services are almost always the parish centre and the schools.

⁵ Law no. 641 of 28 July 1967 would play a fundamental role in the development of school building plans, not only in Turin.

⁶ Of the 52 buildings surveyed, 32 are listed in the Piedmont Region's school building register (EDISCO Piemonte) as active schools. A further 23 school buildings are located in the immediate vicinity of the boundaries of the expansion zones.

⁷ This was the case with the school complex in Corso Vercelli, completed in 1978, and with the school in via Tollegno of the E8 expansion zone, both published in the 447-448 issue of Casabella, dedicated to school architecture.

⁸ These principles are largely summarised in point 3.0 "Standards relating to the work – Characteristics of the work in general" of the technical standards. See Ministerial Decree of 18 December 1975, "Updated technical standards for school buildings".

⁹ Municipal Proceedings – Municipal Council of 30 July 1968, City of Turin Historical Archive.

¹⁰ The group consisted of architects Domenico Bagliani, Andrea Bersano Bergey (who later resigned), Virgilio Corsico, Sisto Giriodi and Erina Roncarolo.

¹¹ This is the area between via Palmieri, via Piffetti, via Talucchi and via Collegno.

¹² Municipal Proceedings – Municipal Council of 14 July 1970, City of Turin Historical Archive

¹³ Work on the school in zone E8 (via Tollegno) was commissioned a few years later in 1973, and part of the building was handed over in 1977, so that the school could be opened in 1977-1978. Municipal Proceedings – City Council 24 September 1973, City of Turin Historical Archive.

¹⁴ Statement by architect Radicioni, Municipal Proceedings – City Council 15 May 1972, City of Turin Historical Archives.

¹⁵ Statement by Councillor Dolino quoting Councillor Lucci, *ibid*.

¹⁶ The plans were signed by the architect Saverio Bacco. Technical Services Division Archive - School Building Area, City of Turin.

¹⁷ The building in the E11 expansion zone was built in 1975, and the one in the E13 zone in 1976. It was also hypothesised to build a further example, reduced in size to three blocks, in the Lingotto area.

¹⁸ Municipal Proceedings – Municipal Council 19th June 1973, City of Turin Historical Archive.

¹⁹ *Ibidem*.

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Caterina Barioglio (Biella, 1985) is Assistant Professor at the Department of Architecture and Design of Politecnico di Torino. She earned a Ph.D. in History of Architecture and Urban Design in 2016 with a dissertation carried out between Turin and Columbia University in New York City. Bridging history and design, her research relates to urban regeneration processes and urban design, with a main focus on building typologies and the effects of urban rules on the city form. From 2016 to 2018 she worked for the new masterplan project of the Politecnico di Torino. Since 2018 she has been a research fellow at the interdepartmental center FULL - Future Urban Legacy Lab. She is an Editor of *Ardeth - Architectural Design Theory Journal*.

Daniele Campobenedetto (Torino, 1986) is an architect and holds a Ph.D. in History of Architecture and Town Planning from the Politecnico di Torino and in Architecture from Université Paris Est. He is currently an Assistant Professor in Architectural and Urban Design at the Department of Architecture and Design of Politecnico di Torino. His research activities especially investigate urban transformation and urban design in European cities, focusing on architectural typologies and urban rules. He is a Research Fellow of the interdisciplinary research center “Future Urban Legacy Lab”. He is also Journal Manager and Editor of the journal “Architectural Design Theory”.