

## Pedagogy and architecture: works in progress

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### 1. *Space as a pedagogic device: physical, relational, didactic space.*

In contemporary society, the term “space” refers to a polysemic semantic structure, indicating a texture of different notions, concepts, references that depend on the application contexts.

Today the space concept – almost unequivocally regarded as a physically or astronomically connoted space – embraces multiple applications and also abstract meanings, used to identify representations and meanings in different sciences and various research fields.

Sociologic space, one’s own private space, inhabited space, everyday space, linguistic space ... these are just a few examples of “cultural loans”<sup>2</sup> to which we are becoming ever more accustomed. In the different science fields, and especially in the field of human sciences, we promote and develop our own concept of space, where this notion is redefined, time after time, according to our own theoretical coordinates.

The concept of *Spatiality*, connected to it, can be defined, in this vision, according to the perspective suggested by Garroni, as “the ability to systemically organize experience”<sup>3</sup>.

Pedagogy, as an education science, can be found in the textures of one’s several extensions, in a formative and constitutive logic of one’s essence. From home to school, from neighborhood to city, in these spaces, pedagogy takes into account the constitutive and formative feasibility to define the category of “educating space”.

If space is conceived as a pedagogic object in the learning contexts, the reference often concerns only the classroom, its furnishings, the school and its location, therefore in a logic of the areas’ material exploitation. Such a physical and spatial configuration is strictly connected to the “culture” of those who design and structure it and only marginally to the cultural essence of the people inhabiting it. The environment, the things and the objects, included in it and therefore structured, play a leading role in the development of human beings; they affect their behaviors and the way they relate one another, besides the educational communication. The inadequate space articulation or the dispersivity of big-sized areas, strictly connoted by fixed furnishings, complicate interactions and lead adults to play a directive and controlling role.<sup>4</sup>

The current typology of didactic space is still based on the ancient layout of 19<sup>th</sup>-century schools, founded on the physical dislocation of students, on one side, and on the visual and hierarchical isolation of teachers, on the other, within a strongly directive, rigid and repressed space.

School distinguishes itself for being institutionally devoted, targeted in its formal structure, to spreading knowledge to young generations. Every single educational reality has its own history, an identity rooted in time, which is in part physically epitomized by the building structure. In these institutions, strictly connoted and often located in grand buildings linked to specific historic periods (for example, the imposing buildings of the Fascist period, now home to several schools on the national territory), the classroom stands as the didactic center, the oldest articulation, the unit of measurement of the educational space; in many classic buildings, the classrooms occupy the greater part of the institute and in these, the *non-classroom* spaces are completely negligible and neglected, background accessories, purpose-less, although potentially spacious and exploitable for different, also didactic, activities.

Nevertheless, the classroom too is currently evolving. The act of teaching and giving a lesson has become less central compared to a few years ago. Groups, modules, use of new technologies, workshops, special rooms and finally experiences in the territory spaces transform the classroom

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<sup>1</sup> The authors of this article share the general layout and the contents of the entire text; the first two sections were written by Monica Parricchi and the last two by Beate Weyland.

<sup>2</sup> Gennari, M., *Pedagogia degli ambienti educativi*, Roma, Armando, 1988 p. 12

<sup>3</sup> Garroni E. voce *Spazialità* dell'*Enciclopedia* Einaudi, Torino, 1978

<sup>4</sup> Fortunati A., Fumagalli G., Galluzzi S., *La Progettazione dello spazio nei servizi educativi per l'infanzia*, Junior, Bergamo, 2008

atmosphere. On the other hand, students tend to relativize obligations and rules, so that the classroom, although still a teaching area, has also become a place open to discussion, debate and negotiation.

As a matter of fact, new classroom archetypes can be designed, meeting the necessities of a dialogic didactics and developing as a polycentric space, provided with more focuses and equipped with advanced technological tools. For new constructions, state-of-the-art architects are envisaging the possibility to create an environment that can be accessed from different directions, without the current barriers, a space that can be modulated on small and big groups.

The proposals of new interiors, designed by more combining solutions, can also be implemented for classic buildings, thanks to setting-up systems and flexible furnishings, especially if it is possible to use non-pre-arranged architectural spaces and to reference low-functional-definition environments, typical of new contemporary urban areas.

## 2. *Beyond the classroom: the meeting space*

Among the reflections concerning this issue, special incentives come from Drago<sup>5</sup>, who aims at upgrading under a pedagogic perspective those non-formalized spaces, precisely oriented towards the education of those rigid and historically dated macro-structures.

The waiting area at the entrance, the place where students enjoy the break and the recreation courtyard represent the typical spaces of the school tradition, not limited to the Italian reality, originated by the disciplinary model. They are often conceived as 'parking', reclusion and control areas, ensuring the service continuity. The permanence within the building formally allows to ensure the presence of students and to guarantee their safety. But the purpose of such conceived places turns out to be essentially residual: it is about compensating gaps and uncertainties concerning the organization (idle times, breaks, professors' absence, etc.). These "idle" spaces, true symbol of immobility, often attest to a minimalist philosophy: these are trivialized places, frequently small and disproportioned, compared to the number of students and awfully furnished ... spaces with no meaning and importance for the students' life and their education. In Drago's opinion, all these spaces do not promote education and need to be radically restructured. In the European, and mostly Anglo-American, reality, these educative "non-places" have been gradually abolished. They have turned into small, cozy, carefully furnished rooms, with a smart décor, in which students can leaf through newspapers, books and silently work alone or in group; furthermore, in some structures, it is possible to exploit these environments also during afterschool free time, as a place of vital and positive aggregation where being at school refers to the most basic reception needs, integral part of the dilemma of life quality and the "problem" concerning times and places where young people can socialize<sup>6</sup>. In basic school, compulsory surveillance doesn't paralyze imagination, as it too often happens in Italy: also the break or the short interval between lessons can become enjoyable and relaxed work-free moments.

Therefore, spaces – in order to become learning environments open to knowledge promotion – should be designed with re-shapeable setting-ups, able to meet new functional and communication needs. The idea is to intervene on a system and combine its element in a fluid and constructive way. Thus, it is possible to create learning spaces as independent environments with respect to the architectural structure, able to adapt themselves to different needs, which can be modify in time. Taking full advantage of new technologies, the learning spaces would become more permeable environments, fostering relation-building open to the surrounding society, both on an actual and virtual level.

We therefore would want to stress the importance of reflecting on planning, which, taking into account the new characteristics and needs concerning the knowledge management, promotes the transformation from the current concept of a closed and rigid space to that of a crossable and flexible System. Everything comes from the unsuitability of the current desk/benches system.

The design of spaces devoted to cultural production and communication is experiencing a delay with respect to many changes under way in society and this is why we currently need to increment and enrich the dialogue between those in charge of researching new ways to manage, produce and convey knowledge and those in charge of furnishing and, potentially, of building new

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<sup>5</sup> Drago R. "Voci della scuola", Tecnodid 2002

<sup>6</sup> Carugati F., Selleri P., *Psicologia sociale dell'educazione*. Il Mulino, Bologna, 2005

structures. The teacher might not need a central space anymore, therefore developing his 'scaffolding' role, coordinating the educational communication. Nowadays, the new educational systems<sup>7</sup>, connected to the new generations of "digital natives", do not revolve around rows of seats and tables, but they must stand as the product of an interdisciplinary dialogue aimed at resulting in multiple opportunities.

### 3. Taking possession of school spaces

In the pedagogic and didactic field, we are witnessing a strong drive towards the definition of new teaching and learning methods, where the student is placed at the center of the educational process, relying upon the concept of asymmetric and intentional relation, filled with emotions and references to the original cultural and affective contexts.<sup>8</sup>

Nonetheless, it is a fact that school can still perpetuate a pattern focused on teaching and on content transmission, in which the teacher knows and teaches, the student doesn't know and learns. Teachers struggle to find the way to implement good guidelines, shared by many, and also good practices. How to work in groups? How to work in stations? With which materials? How to organize the spaces in which these urgent needs can be unfolded?

To investigate this school's resistance area, it is correct to mention the current trend of ethnographic research that aims at analyzing school architectures, mainly with respect to their internal organization (furnishings and finishing, equipment and aesthetic décor) in order to interpret the existing power systems and cultural paradigms.

Markus Rieger Ladich<sup>9</sup> maintains that the tables and chairs in the classroom can be interpreted as signs of the civilization process and as control tools, elements on which power can be measured. The big desk, sometimes placed even on a platform, embodies not only the teacher's central role, seating in front of the students, but also his superiority.

Especially in the Italian context, this is a pattern drawing on Giovanni Gentile's idea according to which it is the teacher, a learned man, who plays the important role of introducing and promoting knowledge to kids and students, while carrying on his passion for culture. The teacher had an almost "mystical" role, such as to make his pupils fall in love with what he himself loved and understood: knowledge. Giovanni Gentile's legacy is institutionalized in the concept of "freedom of teaching", according to which, it is the teacher, as a learned man, who finds his ways to build that strong relationship with his pupils in order to transform them too into learned men. For Gentile, the teacher is also defined by his freedom in interpreting and conveying culture. Freedom of teaching is therefore essential to the definition of his identity. In this basically idealistic matter, methods, techniques and strategies played a secondary role, as they transformed teachers into those who merely carried out orders, useful for those who had no cultural knowledge.

Nowadays, in the didactic and pedagogic field, guidelines follow quite another direction: as a matter of fact, today methods substantiate the pedagogic orientation and the didactic approach. It is precisely how spaces are organized that defines the new educational settings and the new approaches to knowledge. Thus, the classroom furnishings from control signs become tools in the teachers' hands, who – by arranging and re-organizing them according to the new logics, dressing them up or whatever else – have the power to free themselves from this kind of regime.

Bernd Hackl<sup>10</sup> points out that this issue can be applied to different fields of the educational space. Windows are an interesting example: in traditional classrooms, they are designed to listen to the teacher and write; they serve to light up the desks from left to right, by alternating with the impenetrable walls. The atmosphere they generally convey is lean and functional; windows, with see-through glass, are big, narrow and tall and they indicate tidiness and order. It is interesting to notice how usually the students' desks are not placed close to the window, but parallel to the thick

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<sup>7</sup> Parricchi M., *Formazione nella società digitale* in Bobbio A. e Calidoni P. (curated by), *Tra pedagogia e didattica*, Armando Editore, Roma, 2009.

<sup>8</sup> Capurso M., *Relazioni educative e apprendimento*, Erickson, Trento 2006.

<sup>9</sup> Friebertshäuser B., Rieger-Ladich M., Wigger L. (curated by), *Reflexive Erziehungswissenschaft. Forschungsperspektiven im Anschluss an Pierre Bourdieu*. VS-Verlag, Wiesbaden, 2006.

<sup>10</sup> Egger R., Hackl B., *Sinnliche Bildung? Pädagogische Prozesse zwischen vorprädikativer Situierung und reflexivem Anspruch*, VS Verlag, Wiesbaden 2010.

walls dividing them. Incredibly, the window plays its functional role – lighting up the room – but it doesn't involve any students' action.

In the same environments and schools, some teachers – who have already embraced a didactic path focused on the student and on the teaching – have tried to use these given elements as tools in their hands to bring about a change. In an example mentioned by Hackl, windows are decorated with bird drawings, walls are frescoed in a colorful way, tables are combined to form a big one, placed in front of the window; beneath the window, there is a mobile one, on which are placed books and files. The window becomes part of the classroom life: light lights up the working environment and the people performing activities. In this example, the teacher plays a supportive and collaborative role, the nature represented on the walls and on the window is the environment and the context within which the activity is carried out. The window, and what it represents, is part of this environment and its continuation. The window becomes an object of cultural appropriation: flowers and books, a place to be decorated and enriched with what the classroom wants to outline and promote.

These simple examples display a time of great flurry: the new millennium school, hosted in architectures oriented towards outdated models, starts finding its own ways to take possession of its spaces.

#### 4. *Pedagogy and architecture: a work-in-progress dialogue*

Over the past years, some movements of mutual awareness and approaching have been developing, both from the pedagogic and didactic universes and from the architectural world. Although they are still working on quite parallel tracks, more thoughtful, punctual and detailed reflections on the school and its physical space are emerging from both sides.<sup>11</sup>

During the "Abitare la scuola"<sup>12</sup> (Inhabiting the School) conference, two important points have come out: on one side, the architects in charge of building and restoring schools are questioning themselves about specific pedagogic issues more often than what is generally believed. On the other, the educators, who are closer to the actual school reality, are actively committed to offer tangible models and strategies to teachers in order to innovate approaches and methods and open up to the new learning culture.

Architects focus on issues partly concerning the educational and formative world. One issue analyzes the incoherence within the school building regulations, which assign only 20% of total space to corridors, depicting them as a useless cubic area, contrasting with the ever more pressing demands to turn corridors into extensions and developments of the classroom and of the area devoted to common, interdisciplinary and inter-class activities. Another reflection focuses on the inside and outside areas and examines the relations of the school universe, not taken too much into account during the planning stage by the school staff, yet essential to establish a well-proportioned relationship not only with the facing outdoor spaces but also with the context of the country, the neighborhood, the city and to avoid turning the educational/formative space into a separate and closed area, disconnected from the rest of the world. To this end, architects are reflecting on the connection between the building's closed and open, intimate and common spaces. Another issue to be taken into careful consideration concerns the attention placed on materials and colors, both outside and inside the building: for example, choosing wood or non-treated steel can be enhanced by remembering how they change over time, bestowing the building with a sort of "soul" that lives and changes together with its inhabitants. Also colors, although they are often applied after the construction, play a distinctive role and can grant continuity to the planning of spaces. The last issue, resuming without relevance and awareness, Rieger Ladich's subject, concerns the windows, a difficult theme for architects, who need ever more punctual considerations so that the windows too can become educational spaces.<sup>13</sup>

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<sup>11</sup> For a more thorough approach, please refer to B. Weyland's Article *Pedagogy and Architecture: between awareness and responsibility*, *Annale di Dirigenti scuola*, Ed. La Scuola, 2011.

<sup>12</sup> Conference in Pistoia promoted by the architects' professional body, "Abitare la scuola" (Inhabiting the School) 11-12<sup>th</sup> September 2010 <http://www.3ga.it/>

<sup>13</sup> About these reflections, please refer to the contribution offered by M. Scagnol and S. Attia during the conference "Abitare la scuola" (Inhabiting the School).

On the whole, architects focus on the school mainly as a civic building, in which the indoor-outdoor permeability represents an essential element. The main problem therefore becomes that of school building in which the functionality criteria can match the aesthetics ones. The challenge lies in designing an architecture – that can talk and educate to aesthetics and beauty – and, at the same time, in understanding the needs and guidelines coming from teachers and educators. In this regard, interesting are the still topical underlines by the renowned pedagogist Luigi Volpicelli concerning the architecture meaning and the school architecture function: “Architecture, if only for the exploitation function it holds, influences lifestyle, meaning it fosters and supports it when it doesn’t even promote it; therefore, as such, architecture already comprises an educational order and a general vision of life ... architecture must drive and stimulate, but it should not constrain and impose.”<sup>14</sup>

On the pedagogic level, the focus centers around the definition of didactic models and strategies, aiming at a *new learning culture* and on the didactics targeted on the needs of kids, matched by specific environments structured following shapes not just connected to the class concept, but rather alternating with workshops and open spaces with movable furniture to be arranged in a flexible way, according to the activities.<sup>15</sup>

The most current demands architects are facing concern a school environment that can be shaped in a flexible way. Such a place can be restructured and rearranged as teachers rebuild their educational methods, placing into it the activities discovered in their students, the objects congenial to them and the suitable tools to address and develop them. Basically, we are looking for an architectural space, that can be indefinitely reconstructed following the needs of whomever inhabits it.

As Carla Rinaldi writes: “Space can be defined in a language speaking on the basis of specific cultural concepts and on profound biological roots. The language of space is quite strong and influencing due to its analogic nature. The not always explicit and identifiable code is perceived since a very young age. Therefore, as any other language, it is a constitutive element of the development of thinking (...)”<sup>16</sup>.

Having a clear idea of the pedagogic/didactic school direction provides important guidelines not only for to the school system (teachers, students, parents) but also for the planning of buildings, conceived as the ultimate place where the teaching-learning processes are celebrated and where new social relationships among individuals start developing.

Having effective architectonic proposals allows to go beyond the well-known restrictions concerning regulations, budget and urban issues, in order to reach excellence in terms of correspondence among modernity, aesthetics and functionality, which should not be neglected. Therefore innovation cannot disregard a synergy between pedagogic models and architectonic spaces. The dialogue between school and architecture is a work-in-progress: it requires mutual respect and faith in each specific skills in order to innovate methods and spaces with the joint goal of building educational areas for the future.

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<sup>14</sup> Volpicelli L., *L'educazione contemporanea*, vol. III, dr. Francesco Vallardi Società Editrice Libreria, Roma 1963.

<sup>15</sup> Watschinger J., Kühnbacher J. (curated by), *Schularchitektur und neue Lernkultur*, Ed. Hep, Berna 2007.

<sup>16</sup> Bruner J., Rinaldi C., Reggio Children, *Bambini, Spazi, Relazioni*, Reggio children Ed., Reggio Emilia 2000.