

Educating to Beauty: the aesthetical value of child of infants' educative institutions in the Twentieth century's pedagogy

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Abstract

With the publication of *The Century of the Child* in Sweden (1900), which was immediately translated in many European countries and in the United States, Ellen Key's theories start to be applied to educational experiences in spaces and environments reconsidered for children's well-being; the aesthetic and pedagogical dimensions are integrated in the context of the landscape and the city. The pedagogical value of school buildings and furniture becomes an antidote to the degradation and disintegration of the human personality. During the course of the twentieth century, some innovative educational experiences, like those of Maria Montessori and Margherita Zoebeli, which share the idea of the harmonic development of all child's potentials, give new importance to the versatility of spaces and the aesthetic quality of the school environment, which becomes a cornerstone for the promotion and development of the whole society. In face of tragic events like wars and dictatorships, there is an awareness that, between the Spartan model of a *school-barracks*, aimed at the education of soldiers, and Socrates' model of the *school-agora*, in order to foster an open, inclusive society it is the latter that must be chosen. Following this thread, we analyze the discussion that developed in Italy in the years after the Second World War among architects, city planners and pedagogues looking for innovative solutions, which were in large part disregarded.

Con la pubblicazione del *Secolo dei fanciulli* in Svezia (1900), poi subito tradotto in molti paesi europei e negli Stati Uniti, le teorie di Ellen Key vengono applicate in esperienze educative su spazi e ambienti ripensati per il benessere infantile: la dimensione estetica e quella pedagogica si integrano così nel contesto del paesaggio e della città. Il valore pedagogico dell'architettura e degli arredi scolastici diviene l'antidoto alla degradazione e disgregazione della personalità umana. Nel corso del Novecento alcune esperienze educative innovative, come quelle di Maria Montessori e di Margherita Zoebeli, che hanno in comune l'idea di uno sviluppo armonico di tutte le potenzialità del bambino, danno nuova importanza alla polivalenza degli spazi e alle qualità estetiche dell'ambiente scolastico, che diventa centro di promozione e sviluppo della società intera. Di fronte ad eventi tragici come guerre e dittature, vi è la consapevolezza che, tra il modello spartano di *scuola-caserma*, finalizzato all'educazione del soldato, e quello inaugurato da Socrate della *scuola-agora*, si debba scegliere quest'ultima per favorire una società aperta e inclusiva. Su questo filo conduttore si analizza poi il dibattito, sviluppatosi in Italia, nel corso del secondo dopoguerra, fra architetti, urbanisti e pedagogisti, alla ricerca di soluzioni innovative, che sono rimaste in gran parte disattese.

Keywords: childhood, architecture, scholastic building, aesthetics, pedagogy of inclusion

Parole chiave: infanzia, architettura, edilizia scolastica, estetica, pedagogia dell'inclusione

The century of the child and the design of new educational spaces for childhood

The famous Ellen Key's book (1849-1926), published in Sweden in 1900, and translated into Italian in 1906, can be considered one of the main sources of inspiration for the design of spaces and environments designed specifically for children that finds an immediate realization in some educational experiences that

Tiziana Pironi – *Educating to Beauty: the aesthetical value of child of infants' educative institutions in the Twentieth century's pedagogy*

were particularly innovative for their time. As it is known, the masterpiece of the Swedish author was an instant success, as it was a reference point for the instances of an epoch during which childhood was placed at the centre of pedagogical theories and researches (Becchi, 1996, p. 353). Thanks to Ellen Key's theories, we witness the diffusion of a new pedagogy of childhood, in the believe that the space in which the human being grows up can represent an important element for his/her education, and for this reason it should be in full harmony with his/her deepest needs.

In *The Century of the child* Ellen Key moved a bold critic to the existing educational institutions which, according to her, were characterized by a depersonalizing atmosphere, solely responsible to control, conform, homologate, forming flocks-men instead of free and independent persons:

The kindergarten is like a factory [...] from the ground floor – the kindergarten – these first products; [*children*] all equal, go to the first floor – the primary school – and so forth. The main aim of the school reform should be the fight against the exuberance of shoddy products that invade every field, and the creation of new individual methods (Key, 1906, p. 163).

So she pointed the finger against the nineteenth century model of school-barracks. “It seems that, starting from the kindergarten, we think at our children as the soldiers they will be one day”¹ (Key, 1906, p. 164).

In order to uncover the untapped potentials of any single child, it became crucial to transform radically the school environment which has been always characterized by bare, unadorned, anonymous walls, consisting in long rows of black desks, in front of the teacher's desk, as well as the traditional type of *classroom/corridor*.

Moreover, Ellen Key's book resumed William Morris' considerations – just think the British experiments of the garden-cities – in enhancing the aesthetical value of the environment for educational purposes, foreseeing suitable, decorative solutions: on the basic issue that “beauty educates”, the goal was to promote the development of unique individual potential, thus avoiding the inauspicious risk of flattering and homogenisation. For this reason, the writer suggested to decorate the classrooms with “artworks [...] or copies of famous models” (Key, 1906, p. 178).

In addition to the influence played by Morris, Ellen Key revealed the echo of Owen and Ruskin's theories, in asking for a democratic conception and a not-elitarian artistic culture. In recognizing the social value of art, with its inevitable repercussions on the educational level, the aesthetical appreciation of space was considered an effective antidote against the degradation and fragmentation of human personality, in the belief that living in a beautiful and cared environment would make happier and therefore better people. According to the Scandinavian author, slovenliness and vulgarity should be fought, starting from the private and public spaces, by eliminating all that might be uncomfortable and less functional. As she had already written in her essay dated 1898, *Beauty for all*: “Only when there will be nothing ugly to buy, when beautiful things will cost as much as the ugly ones, then the beauty for all will really become a reality” (Key, 1898, p. 29).

Ellen Key highlighted the gregarious risks of an education designed to produce that *mass-man* who would become “part of the flock that the ‘superman’ dominates” (Key, 1898, p. 9). Openly expressed was the utopian, messianic value of *The century of the child*, dedicated “to the parents who hope to educate the new man”; not by chance the book began with a famous quotation, taken by Nietzsche's Zarathustra: “Love your children's motherland, may this love be your nobility – unexplored land in far seas! I want you to open your sails by searching it! You owe a repair to your children because you have created them. May this act be the redemption of your past, may this be the banner of your life” (Key, 1906, p. 1).

From childhood on, the main aim should be the development of individual consciousness, of personal independence, by avoiding practices that tended to regimentation and approval. This was a message that shared clear sympathies with the creation of the Children's House, founded by Maria Montessori in 1907 in the district of San Lorenzo in Rome. We do not have to forget that Ellen Key's book was published in Italy the previous year, achieving great success, enhancing debates and discussions, especially in the feminist circles of the time, which the famous Italian educator used to attend (Pironi, 2010).

Maria Montessori's Children's House: a new educational space for childhood

In 1907, in the deprived quarter of San Lorenzo in Rome, Maria Montessori (1870-1952) had the opportunity to realize the pedagogical experiment that made her famous, managing to transform a common “kindergarten” in the Children's House. It was located at the ground floor of a renovated tenement of the quarter and inserted in a project of urban and architectural regeneration. The house was conceived as the nerve centre of the quarter and the core of a project of human and social renovation: “heart of the renewal the school in the house” (Montessori, 2000, p. 157) (Fig. 1). In that little microcosm, the researcher tried to realize the idea that childhood could become protagonist of the adult change, in a view of regeneration of the whole humankind (“the child is the man's father”). It was intended to promote an inner change in the families of the tenants, not only thanks to the education of their children, but also by involving them in the whole educational project, especially starting from mothers: so – as the researcher writes – “each of them will feel linked not only to her own child, but to the whole humankind” (Montessori, 2000, p. 187).



Figure 1 – The first Children's House founded by Maria Montessori in 1907 in the quarter of San Lorenzo in Rome.

We must recall that the Maria Montessori's feminism resulted in a conception of family life that provided in the district the socialization of traditionally female tasks (infirmaries, ironing facilities, central kitchens, etc.), in order to promote the work requirement of the modern woman. The Children's House became the prototype of a “socialized house of the future”, allowing each woman to develop in a “free human individual” (Montessori, 2000, p. 158).

Thanks to the support of feminist circles of the time, Maria Montessori replaced the old desks with light and nice little tables for two that she designed and made them built in order to facilitate the autonomy and freedom of movement. Low child-friendly and soft coloured credenzines equipped with locks were fastened to the walls; they were decorated with “pictures representing children, family and country scenes, pets – all figures were extremely simple and gentle” (Montessori, 2000, pp. 184-185). All pieces of furniture were designed by the researcher based on a criterion of “beauty” able to attract the child “like the coloured petals attract insects” (Montessori, 2011, p. 114); this kind of beauty should not be confused “with superfluous and luxury but with grace and harmony of lines and colours, combined with that extreme simpleness required by the lightness of the furniture” (Montessori, 2000, p. 185).

In fact she affirmed:

No ornament could distract the child who is concentrated in a job; by contrast beauty inspires the gathering together and gives rest to the tired spirit. This language would sound strange, but if we want to refer to scientific principles, we could say that the right place for human life is an artistic place: therefore if the school wants to become a scientific cabinet of human life, it must collect the beauty like a cabinet of bacteriology must collect stoves and nutritive soils (Montessori, 2000, p. 129).

Maria Montessori did not fail to argue against the hygienist obsession of her times that made schools similar to “hospitals” and “mortuary rooms” equipped with “black desks and grey and bare walls [...] because the child’s spirit remains undernourished, hungry, to the point of “accepting” the indigestible intellectual nourishment imparted by the teacher” (Montessori, 2000, p. 130).

On the contrary, only an environment inspiring serenity and harmony could facilitate the child’s inner wellbeing that is fundamental to the process of self-education and at the base of a new climate of human relations. Living in a “beautiful” environment with “ceramic plates, glass cups, brittle objects” stimulated in the little inhabitants that sense of belonging that led them to take care of the environment at all times, training “to avoid to bump, to overthrow, to break” (Montessori, 2000, p. 130).

Maria Montessori remarked that the vitality of the “home” space is not for children, but of children; the house was structured in such a way that children could feel it belonged to them, with windows and doors in line with the children’s height and in direct communication with the outside space (garden, vegetable garden) in order that everyone could be free to go out and come inside at his good pleasure at any time of the day (Montessori, 2000, p. 57).

Montessori could not have missed the critic to the schools outlined by the author of *The Century of the child*: schools were characterized by symmetric and uniformed rooms, separated to the social life. The Children’s house was placed instead in constant dialogue with the reality of the quarter, as living example of new human relationships, placing itself in full harmony with the ideal sketched in the pages of the famous essay collection written by the Swedish writer:

The big mistake of the current education is to care too much for children. The aim of the future education will be to create for children a beautiful environment in the highest and widest sense of the word in which they could grow up and move freely, and where the intangible rights of others are the only restriction. Only then adults will be able to penetrate in the now as then quite unknown realm of the children’s soul (Key, 1906, p. 71).

The Montessori experience with its radical transformation of the school environment will echo around the world: from the kindergarten’s rigid and fixed bench, often arranged in tiers, to a child-friendly space (Fig. 17). Maria Montessori’s perspective against a school of isolation and segregation, as well as her insights on the concept of a school open to the urban context and to the natural environment will be promptly resumed in the coming years by the most advanced architecture and teaching methods for children. The need to promote a radical change to the school environment, by creating a rich articulation of a space destined to children, will be developed at the international level, albeit sporadically, since the twenties in drawing attention of the architects to the demands of psycho-pedagogy from the Netherlands to Germany, from Great Britain to the Nordic countries. The nineteenth century model of the school-barracks will be challenged, while seeking at the same time to enter the school building in the design of the surrounding environment².

Starting from the Montessori experience, we find in Italy some rare examples of school pointing to the organization of spaces and educational environments, paying particular attention to the relationship between architecture and pedagogy, in full accordance with the urban landscape³. In fact the legislation of the time, both the Law promulgated in 1912⁴, and the one of 1925⁵, maintains the usual setting of the curriculum and therefore it prescribes the traditional articulation of school spaces (classrooms, corridors), limited exclusively to indicate the hygienic rules to be followed. In the middle of the fascist Regime, we should highlight the case of the kindergarten “Sant’Elia”, organized in Como by the famous architect Giuseppe Terragni (1904-1943): it is a real cutting edge in the history of the Italian design of kindergartens

between the two world wars, in which the wideness and the brightness of the rationalist rooms meet only hygienic criteria (Emiliani, 2013/2014, p. 41).

Instances of renewal in the Second post-war: the example of the Italian-Swiss Village founded by Margherita Zoebeli

In April 1946, on the ruins of a city that was almost completely destroyed by the war, the Swiss educator Margherita Zoebeli (1912-1996) was commissioned by the Swiss Worker's Aid to found in Rimini the Italian-Swiss village⁶, still existing today. The architect Felix Schwarz (1917-2013)⁷ was encharged to develop the project; he shared its aims since the beginning that consisted in creating a communitarian pedagogy according to which the room and architectonic disposition of the village should promote both individual and social development, following the principles of the Active Education. The confidence in creating a society based on the self-government was expressed in the aesthetical value of the environment to enhance the education to self expression, to the development of the individual potentials, to the autonomy at every age, preparing the meeting with peers, according to clear communitarian instances.

It is extremely significant that Margherita Zoebeli entrusted the realization of the Swiss-Italian Village to the architect Felix Schwarz and later to Giancarlo De Carlo (1919-2005)⁸. The Zurich architectural renovation gave a fundamental imprinting to the growing Village that anticipated the principles of the *new school* outlined by the architect Alfred Roth in his book *Das neue Schulhaus* published in Zurich in 1957. The educational intentionality on which was based the project was underlined, in April 1946, by Schwarz in an article of the Rimini's magazine *Città nuova*:

These barracks, which are sad memory of a bitter past, had to be designed and transformed in order to start the children's education to a better future, as expression of joy and peace, and had to become a symbol of the rebuilding of the city [...]. Maybe we will achieve only a modest stage of our political aims: to educate independent and self-trusted people, able to reject any form of world view that tends to act in an authoritarian manner. Architecture is the clearest expression of the humankind's will and political intentions. The individual, by using the architecture, is directly influenced by it (Schwarz, 1946, p. 2).

The urban planning of the Village, with the distribution of the pavilions, the articulation of the exterior spaces, with its common square and the little squares marked by bushes and flower beds, still represents the prototype of an ideal city: the classrooms are disposed in many little houses around a small square or along paths meandering in nature (Figures 2 and 3).

This architecture – as stated Schwarz – tried to “put in high value and to experience all possibilities of a democratic education” (Schwarz, 1946, p. 2). In the often expressed conviction that “a different education can change the world”, Margherita Zoebeli underlined their common desired, shared with Felice Schwarz, to give life to a social and pedagogical experiment, finally free from the oppressive and authoritarian forms of the past:

We knew precisely how they did not want to place the barracks. We did not want to build a concentration camp, neither to dispose the barracks in parallel rows, nor to follow a symmetric planning or in a square with an inner courtyard [...]. It seemed that the disposition should take an educational value by promoting the formation of autonomous groups, in the same time a place where groups could meet together was necessary. Like the city, in the village there is a small square. The classrooms, like the houses, have their own garden and their own land around them (Fondazione Margherita Zoebeli, 1998, p. 28).

This architectural structure, designed on the basis of aesthetic and educational organization of the space, expressed the intention to avoid as much as possible to use squared forms and corners: for example the paths linking the pavilions have been designed so as to meander gently in the natural landscape. This in the belief that the angular structure was not the most common form in nature, unlike the soft and circular forms which are not concerned with sudden breaks, alluding to a sense of infinite. On the contrary the prevalence in the environment of squared lines would favour stiffening in the perception of the life itself.

Tiziana Pironi – *Educating to Beauty: the aesthetical value of child of infants' educative institutions in the Twentieth century's pedagogy*

On this particular aspect, namely the fact to consider the fundamental relationship, or better, man's belonging to nature, is possible to find an answer to the rigidities of the right angle in the organic architecture of Frank Lloyd Wright (1867-1959): the organic architecture overturns the concept of angle and replaces it with the circle⁹.



Figure 2 – CEIS in 1946



Figure 3 – CEIS today

To date, the Village in Rimini (CEIS) is enclosed by evergreen bushes that are not taller than children; the hedge is interrupted on each sides (in line with the cardinal points) with small gates, in order to allow the connection with the urban context: it is a friendly and harmonious, varied and alive place, that communicates with the city life, in the middle of a green area and in the same time open to the rest of the world (Pescioli & Zoebeli, 1965, p. 178).

Concerning the complete lack of barriers between school and the urban context Gastone Tassinari's observation is particularly eloquent:

The school should have a particular position in relation to the city, a function of connection and gathering, like the CEIS. The gate is open [...]; entering is just like continuing a walk through the city. But in the same time you can grasp an atmosphere of serenity, a climate that invites to reflection, to enjoyment also on the aesthetical level (Tassinari, 1998, p. 38).

The relationship between pedagogy and architecture for a school open to the city

The characteristic of *opening* that marks the Village CEIS since its beginning and is in opposition to the *closure* of institutions that is the hallmark of totalitarian regimes, after World War II it turns out to be an aspiration shared by architects and educators who are placed in a perspective of renewal. They are clearly aware that with the advent of fascism the Italian school had been transformed into a tool of ideological reproduction of the regime. It appears very significant that the magazine *Domus*, in June 1947, dedicated a special issue on the school architecture, entitled *Educational Architecture*; educators and architects gave their contributes with the conviction that a connection between progressive education, inspired by Dewey, and a new architecture.

The architect Giancarlo De Carlo, who, as we have already stated, collaborated with Margherita Zoebeli for widening the Rimini's structure, said on that occasion that schools in contemporary cities will form the core of the social life, as a propeller centre for its development, going as far as to say "the urban problem of the school has become a urban problem of the city" (Zoebeli, 1947, p. 17).

On the institutional front, these instances were implemented only partially, so that in 1949 the Ministry of Education announced a competition for school construction for the design of open air schools: here the concept of outdoor school was understood throughout its width, even specifying its social and cultural meaning, in full break with the previous instalments expressed by the regime. The architect Ciro Cicconcelli (1920-2010) won the competition. He specifically referred to Montessori Children's houses by designing "a school conceived as a busy community" in which children were supposed to take care with cleaning and manutention of the interior spaces and the care and cultivation of the outdoor ones (Cicconcelli, 1949, p. 16).

In fact, with rare exceptions, we see a bleak overview of the public school building, so that Bruno Zevi wrote in the magazine *Espresso* Italy is the most uncivilized country in terms of schools (Zevi, 1956, p. 239). In that article, he expressed his bitter awareness that in our country it has taken very little initiative to transform the existing barracks-schools in an open school able to stimulate social changes.

Only in the Sixties, in the face of the changing needs of the Italian society, the Swiss-Italian Village in Rimini (CEIS) was taken as a reference point by the leading educators of the time, which emphasized its innovative feature as ideal space or the life of a children's community¹⁰. Several Italian municipalities availed themselves of Margherita Zoebeli's consultancy for the organization of kindergartens, including that of Bologna. From then on, the architecture of kindergarten shows more receptive of the principles of the Active education, while the situation for primary schools and the middle and high schools did not change much. We must recognize that in some crucial moments, faced with new challenges and demands of change, like in the Second after war period and at the beginning of the Sixties, there is a need to reflect on the relationship pedagogy/architecture¹¹.

In July 1960, the 12th Triennale in Milan brought to public attention the issue on the renewal of school architecture: the English pavilion made a difference with the construction of a kindergarten equipped with pieces of furniture and placed outside, which enjoyed great interest (fig. 5). In that occasion Italo Calvino (1960) wrote that "the presence of the little English school in the floor bed of the Triennale is a

revolutionary event that should upset the traditional conceptions of our policies and school administration” (p. 47).

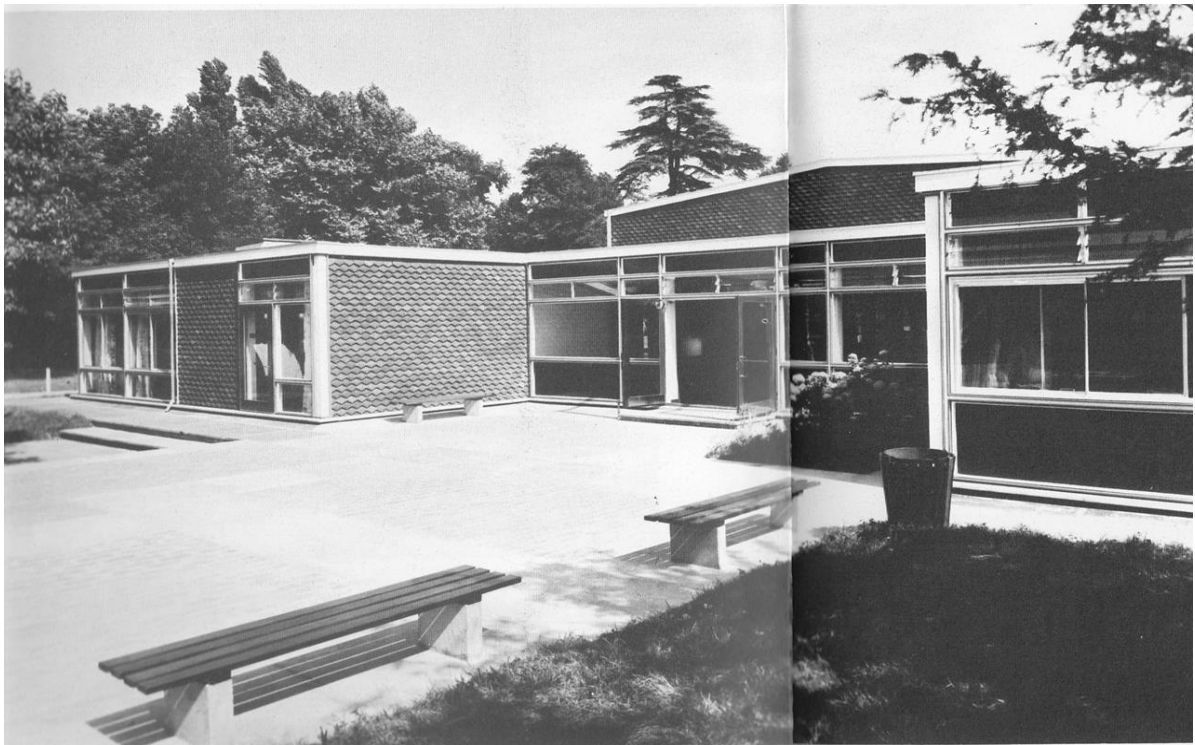


Figure 4 – English school

In 1961, ahead of the new Middle school reform, the University of Florence organized a seminar, open to teacher, to which took part also Zoebeli. Professors in Pedagogy (including Lamberto Borghi and Francesco De Bartolomeis), urban planners like Ludovico Quaroni¹² and architects, among them in particular Giuseppe Gori is to be mentioned participated as relators: their aim was to handle in an interdisciplinary view the problem of the kindergarten and Middle school buildings.

Also Bologna, in 1963, the pedagogical Second February was dedicated to the issue of the architecture for the new Middle school: it was also an important moment of exchange between architects, urban planners, administrators, educationalists, sociologists and teachers. On this occasion a competition was held for the design of a school that aimed to become the nerve centre of the social and cultural life of the neighbourhood.

In those years the reference point was a model of the community pedagogy that will find expression in kindergartens promoted by Loris Malaguzzi (1920-1994) in the city of Reggio Emilia, starting from 1963 and that, after his death, will be formed the International Centre that carries his name (*Reggio Children Approach*). Conceived as a living organism, flexible and adaptable to new requirements, the kindergarten is opposed to the traditional school, characterized by closed compartments (the classrooms), that do not communicate to each other.¹³ The environment is in fact designed by an architectural point of view in order to be functional to the interconnections that exceed the traditional barriers and gerarchies between adults and children, favouring a strong relational climate: “The old educational theory of separation leave the place to a new educational theory of participation” (Filippini & Vecchi, 1996, p. 25)¹⁴. Here too we find the centrality of a common area (the square) onto which the different workshops/labs are interconnected with the use of filter spaces (porches and windows) instead of walls, to share the sense of belonging to the entire community. Placed in relation to the whole city, the aesthetical and architectural experience of *Reggio Children* becomes a knowledge tool and a mean of social participation. Despite the common innovative approach of Montessori Children’s houses and the Village based in Rimini, we must recognize that it emerges a minor

attention to the personalization of spaces by single children, given the limited presence of corners or niches that enable individual activities (Fig. 5).



Figure 5 – The outer space of the kindergarten of the Reggio Children Approach

This aspect was taken in account by the architects who designed the kindergartens in Bologna:

The big unstructured space has been deliberately avoided [...] because studies conducted by psychologists and educationalists showed a heavily negative impact on the behaviour and the education of the young child. He refuses big groups, prefers little corners, the niche, even if very little, where he can hide for a few seconds and spy on the outside world (Gualdi, 1985, p. 108).

By the Seventies, there has been a further radicalization of the debate around the traditional architecture, founded on a model of “authoritarian” and “monumental” school. As De Carlo (1972) writes:

In the architecture the organizational structures can be defined authoritarian when the articulation of spaces does not stimulate the community to promote communication exchanges at all times and on a level of absolute equality, formal configurations are considered monumental when they adapt to external codes of the institutions and do not welcome the free expression of users (p. 65)¹⁵.

In fact Giancarlo De Carlo introduces the concept of “school in the city”, through the “disintegration” of the school building and its distribution in the urban context, he distinguished between specific educational activities, or “core” activities, to which to allocate special spaces, and activities “of crown”, such as laboratories, to be integrated in the city; therefore social and cultural activities included in the school and school activities spread to the city environment:

Classrooms, labs, dining halls, entertainment halls, gyms, and sport and leisure equipments must be shared – at least in part, or for limited period of time – with other activities that even if they are not defined as educational, they educate however, for non-institutional channels, much more than the school (De Carlo, 1972, p. 70).

The idea is that of a school that opens to become a permanent educational centre, as only the interaction between school, city, and region would allow, according to De Carlo, a variety of educational experiences.

Tiziana Pironi – *Educating to Beauty: the aesthetical value of child of infants' educative institutions in the Twentieth century's pedagogy*

These are ideas and projects that unite the Italian architect and the Dutch Herman Hertzberger (1932, Vicente)¹⁶, since both reject the drifting functionalistic architecture of the post-war period, which in those years designed an amount of anonymous and “dehumanized” suburbs (Emiliani, 2013, p. 80). Taking inspiration by Maria Montessori, Hertzberger developed a project in the Netherland of some schools with multicentre and multi-purposes classrooms, with differentiated laboratories, as he was convinced that in the knowledge society a variety of skills should be developed. The Montessori school he built in Delft in 1963 refers precisely to a model of a little historical town on a human scale, in which classrooms are houses, while the interior common space is represented by a variety of streets that connect to a small square: it is an articulated space, rich in suggestions, usable in a personal way by children¹⁷.

The image of the school open to the community, to the city, is transposed into the Italian law (D. M. 18-12-75)¹⁸, that is still in force: in addition to recognizing the failure of the traditional classroom which only allows the lecture as main teaching strategy, the concept of *educational continuum educative*, has been introduced, providing the link with social and cultural activities of the city.

In the light of these indications, as Emiliani said, it would be crucial to ask first of all the question of the choice of the context in which to enter the school building (porches, squares, gardens, etc.), as “caring for the school entrance means also to facilitate meetings among parents and the creation of an inclusive society” (Emiliani, 2013, p. 142).

However, it must be recognized that even today the current legislation is generally disregarded; innovative experiments we have described could not find a realization on a large scale, with obvious discrepancies between practice and theory. Let's think on the urban planning choices to decentrate the school building to the surroundings of the residential quarters, excluding thus the school from the urban context. Today, and more than ever, it is urgent the need to offer concrete answers to the great challenges of our times, taking seriously the relationship between pedagogy and architecture, in the belief that the accuracy of the internal space of a school conceived as a real beating heart of an educational community, in harmony with the surrounding landscape, predisposes to a greater inclusive climate and learning motivation and finally is the most effective antidote against vandalism, bullying, racial intolerance.

Notes

¹ Ellen Key's statements seem to anticipate Michel Foucault's thesis concerning the birth of the school between the 17th and the 18th centuries as a place of training, correction and control that is not so different from barracks and prisons. (Foucault, 1993).

² We should recall the Waldorf School, created in Stuttgart in 1919 by Rudolf Steiner with regard to the attention paid to the architectural form of school buildings and to the chromatic dimension of the spaces based on Goethe's *Theory of colours* (Carlgren, 2012).

³ This is the case of the teacher Giuseppina Pizzigoni (1870-1947) who in 1911 founded the *Scuola Rinnovata* in the district Ghisolfa in Milan, with the collaboration of the engineer Erminio Valverti. Also in the Pizzigoni's realization, the school is not a separated and close world: “It is necessary to broaden our concept of school until we feel that the school is the world” (Pizzigoni, 1913, p. 12). In this school classrooms have wide windows-doors to allow free access to outdoor spaces. The building is built in a natural setting, used as farmland, with adjacent spaces for animals (apiary, henhouse, etc.) and equipped for sport activities. Giuseppina Pizzigoni made use of the collaboration of specialists to enable the guided experience of children in relation to the local social and cultural environment (let's think to the study/observational experiences of the factory, handicraft, agricultural work).

⁴ Regulation dated 11-01-1912, n. 12, *Gazzetta Ufficiale del Regno d'Italia*, n. 26, 01-02-1912, Roma, pp. 597-606.

⁵ Ministerial Law dated 04-05-1925, *Gazzetta Ufficiale del Regno d'Italia*, 196, 25-08-1925, Roma, pp. 3617-3622.

⁶ The commitment towards abandoned children led Margherita Zoebeli to think upon the relationship between affective neglect and cognitive development: against authoritarian and depersonalizing practices of the existing institutions, she created an environment where personal needs, especially the affective ones, were recognized and satisfied (Pironi, 2014, p. 154).

⁷ Felix Schwarz, who trained in the Zurich cultural climate, had graduated with Hans Hofmann at ETH Zurich. In the forties he collaborated with Alfred Roth, a theorist of the *Nouvelle École*, and with the Dutch architect Aldo van Eyck to the development of a new architecture for educational institutions.

⁸ Giancarlo De Carlo, an important exponent of the architectural breakthrough occurred in the 50es and 60es, he was one of the founders of the movement *TeamX* which challenged the functionalism of Le Corbusier. In 1964 he was in charge of the

Urban Planning of the city of Urbino, he designed its University campus in complete fusion with the landscape, physically integrated in the hills (Rossi, 1988).

⁹ Frank Lloyd Wright is a famous American architect and one of the main exponent of the organic architecture, based on the harmony between man and nature; his works were translated and widespread in Italy, immediately after the Second World War (Wright, 1945).

¹⁰ In 1957, on the tenth anniversary of the creation of the Swiss-Italian Village, an exhibition on the relationship between school spaces and education was organized at the CEIS.

¹¹ It must be reminded that during the 60es the early studies on proxemics were published, on relation of closeness in communication, thanks to the American anthropologist Edward Hall (1968).

¹² Ludovico Quaroni (Roma 1911-1987), one of the most representative figure of the Italian architecture and urban planning, taught at the University of Florence from 1957 to 1964.

¹³ Based on the concepts of *transformability* and *flexibility*, the school must be able to change during the day and throughout the year in order to adapt to the continuous design of the educational project (movable walls, furniture on wheels, equipment adapted to child's age (Filippini, 1996). In 2012, the International Centre L. Malaguzzi organized the seminar *Designing the educational spaces* in order to highlight the value of the interdisciplinarity in the design of new schools.

¹⁴ The space-laboratory of the *atelier* is the educational core; it occurs here the manipulation and experimentation of materials under the guidance of a specialized professional figure (atelierist) that coordinates teachers and children in their knowledge and creative path.

¹⁵ He was one of the first architects in Europe to theorize and practice the participation of users in the planning stages, in particular for the projects of Terni, Rimini and Mazzorbo. He argued that the project had to be implemented “for attempts” and not merely by withdrawing in a rigid solution; he went as far as to say “that in the order lies the frustrating boredom of imposition, while in the disorder reigns the exalted imagination of the participation” (De Carlo, 1973, p. 21).

¹⁶ H. Hertzberger is a world-renown designer and University lecturer, awarded with the *Royal Gold RIBA* in 2012. After is degree in 1958 he collaborated, from 1959 to 1963, with Aldo van Eyck and Jacob Bakema as Editor of the magazine *Forum*.

¹⁷ Further Montessori Primary school designed by Hertzberger in Amsterdam are the school “De Eilanden” (1996-2000) and the Montessori College Oost (1993-2000).

¹⁸ Gazzetta Ufficiale n. 29, 02-02-1976, suppl. ord. p. 1-55.

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