



The Beauty of the Unusual: An Architectural Inquiry into the Reggio Emilia Approach

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Abstract

For many years, the Reggio Emilia approach has been in the spotlight of the international debate on early childhood education, attracting countless devoted followers in preschool centres all over the world and inspiring an ever-increasing amount of pedagogical research. At the heart of this educational philosophy, space is considered a ‘third teacher’ and so is carefully thought and arranged, functioning as a key source of educational stimulation and insight. However, although a great number of studies from the field of pedagogy have been carried out to gain a better understanding of Reggio Emilia’s physical learning environments, not so much has been said from the designer’s perspective. This paper tries precisely to fill that gap, not purporting to isolate these fields of knowledge from one another but rather with the intention of setting an original inquiry that brings them closer together. This is made possible thanks to the definition of an innovative critical lens that diverges from previous discussions on the topic. More specifically, the work is triggered by Alfredo Hoyuelo’s statement (*La estética en el pensamiento y obra pedagógica de Loris Malaguzzi*, Octaedro, 2006, p. 120) in reference to Loris Malaguzzi’s theories: “building pedagogy means dreaming the beauty of the unusual”. Simply by replacing the term ‘pedagogy’ with ‘physical environments’ in that sentence, a novel insight for both architects and educators can emerge, with major implications in terms of conception, design, use and signification of space.

Keywords Reggio Emilia approach · Loris Malaguzzi · School design · Third teacher · Early childhood education

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Introduction: The Reggio Emilia Approach and the Built Environment

The Reggio Emilia educational approach emerged after World War II in a handful of villages around the Italian town of Reggio Emilia. It was mainly developed under the guidance of Loris Malaguzzi (1920–1994), an inspired teacher who joined forces with other committed collaborators and parents—especially women (Balfour, 2016)—to provide an innovative public education for their youngest children, despite the harsh socio-economic reality they lived in. In 1981, the Modern Art Museum of Stockholm hosted a touring exhibition curated by Malaguzzi's team, *L'occhio si salta il muro*, showing the world the unique and enviable experience of Reggio Emilia's preschools. Since then, the international popularity of this educational philosophy has risen steadily (Edwards et al., 2011; New, 2003; OECD, 2017), giving rise to Reggio Children, a non-profit research hub devoted to early childhood education.

As the basis of his philosophy, Malaguzzi believed that children are born with 'a hundred languages', an expressive potential that should be fearlessly supported and promoted by adults.¹ With this conviction in mind, he refused to focus only on children's learning processes. Instead, he aimed at the establishment of non-hierarchical relations between children and adults—including teachers, *atelieristi*,² *pedagogisti*,³ auxiliary staff, families and public servants. In his own words: "relationship is the primary connecting dimension of our system (...) understood as a dynamic conjunction of elements interacting toward a common purpose" (Edwards et al., 1993, p. 68). According to this commitment to democratic relations, school buildings in Reggio Emilia were also given shape and identity by non-subordinate organizations, resulting in compact distributions of equivalent rooms, where the hegemony of the traditional classroom disappeared and horizontality was considered "the physical manifestation of a democracy of functions, equal dignity and sociality" (Ceppi & Zini, 1998, p. 37).

Absorbing lessons from John Dewey, Jean Piaget and Lev Vygotsky, Malaguzzi also claimed that education is primarily about the creation of learning 'conditions', which implies collegiality and co-responsibility in the construction of knowledge and in decision-making (Edwards, 1995). By the same token, the design processes of Reggio schools also became participatory. This was, as Veà Vecchi recalls (2010, p. 98), rather a scandal in the 1960s and 1970s, when it was quite rare for a group of parents, along with a pedagogical team, officers and politicians, to sit at the same table as the architect.

¹ In 1987, while preparing for a double tour in Europe and North America, the above-mentioned exhibition (*L'occhio si salta il muro*) was renamed as *I cento linguaggi dei bambini* (*The 100 hundred languages of children*). Since then, this principle has always been advertised as the main basis of the Reggio approach (see "The Hundred Languages of Children Exhibit", 2001).

² The *atelieristi* were introduced by Malaguzzi in the late 1960s to work alongside teachers. These figures usually had a background in visual arts and their main role was to support and develop children's expressive languages.

³ The *pedagogisti* are educational advisors with a higher degree in psychology or pedagogy that work with a small number of schools, helping teachers understand children's learning processes.

Furthermore, Malaguzzi rejected predefined educational programs, relying instead on what he called *progettazione*. This combined a process of pedagogical documentation with active listening to children's evolving interests. From the very start, learning projects in Reggio schools were therefore "subject to modifications and changes of direction as the actual work progressed" (Rinaldi, 2005, p. ix). Correspondingly, learning spaces were also understood as ever-changing. In Malaguzzi's words, "we think of a school for young children as an integral living organism, (...) as a sort of construction in motion, continuously adjusting itself" (Edwards et al., 1993, p. 62). Over the years, this idea has led to the conviction that both children and teachers must be recognised as active and constant spatial researchers on their own right—what Vanessa Miller has named "vernacular designers" as opposed to professional ones (Miller, 2019). Evidently, this was made possible thanks to a refined cultural climate, which Malaguzzi forged with the help of renowned intellectual and artistic figures of the time, such as Bruno Munari, Luigi Nono, Cesare Musatti, Gianni Rodari or Bruno Ciari.⁴ Since the 1960s, compulsory art courses have been given to all staff in Reggio Emilia—not only to the famous *atelieristi* but also to regular teachers, cleaners and cooks. All these participants were and still are expected to value the physical environment as a powerful educational material, leading them to be overtly proud of keeping their schools beautiful.

State of the Art: Space as Third Teacher and Malaguzzi's 'Beauty of the Unusual'

From the above general description, it may be inferred that considering the role of the built environment as a 'third teacher' for the Reggio Emilia approach is nothing new. Indeed, this topic has been widely addressed since the turn of the century by well-known pedagogues and educators like Carla Rinaldi or Vea Vecchi in Italy, Teresa Strong-Wilson or Carolyn Edwards in the United States, and Alfredo Hoyuelos or Maria Antonia Riera in Spain.⁵ Probably, the most comprehensive and thorough work in this line—carried out from a transdisciplinary perspective, in-between architecture and pedagogy—was done by Giulio Ceppi and Michele Zini who coordinated an ambitious research project financed by Reggio Children and the Domus Academy of Milan already more than 20 years ago (Ceppi & Zini, 1998). Since then, however, there has been relative silence in academic circles about Reggio Emilia's spatial realities, with the exception of some young practitioners like Spanish architect Clara Eslava, who has endeavoured to keep alive the transversal spirit of Ceppi and Zini's research.⁶

⁴ For a general analysis of the cultural context constructed around the figure of Malaguzzi, see Beresaluze Díez (2008).

⁵ Among their publications: Rinaldi, (2005, p. chapter 6: The Space of Childhood (written in 1998)), Vecchi, (2010, p. chapter 5: Environments), Strong-Wilson & Ellis (2007), Edwards, (2003), Hoyuelos (2005a) and Riera Jaume (2005).

⁶ Although Eslava has not published any papers solely focused on the Reggio approach, this topic is present in most of her work; see for instance: Eslava (2014).

It is in this precise direction that this research is oriented, hoping to fill a gap with great potential for contemporary theory and practice, both from an educational and architectural perspective. This is made possible thanks to the definition of an innovative lens capable of guiding an essentially speculative yet critical analysis, inspired by one of Alfredo Hoyuelo's statements about Loris Malaguzzi's theories: namely his encouragement "to dream the beauty of the unusual" as an opportunity for teachers and children to question what seems obvious to the eye of routine.⁷ This idea has been explored by several figures from the pedagogical field, from Paola Cagliari to Peter Moss, who have often noted how "Malaguzzi valued uncertainty, desired wonder and amazement, loved to marvel at the totally unexpected" (Cagliari et al., 2016, p. xvii). Also Strong-Wilson and Ellis (2007, p. 42) have insisted on how the Reggio approach tends to "introduce provocations, meant to surprise children spark discussion". However, it is probably Hoyuelo who has constructed a more exhaustive theory about Malaguzzi's understanding of the unusual. To this end, he has established a parallelism with the Russian term *ostranenie*, which encourages alienating familiar things to examine them in a new way. Aside from being the seed of artistic creation, *ostranenie* relates to the moment "when the child realises that she is author and protagonist of her own learning" (Hoyuelos, 2006, p. 123). This analogy basically points to a sense of wonderment, a momentary thrill—both sensory and cognitive—that engages children in a field of tension, driving them to explore beyond. The discovery of the unusual therefore relies on what Manuel Delgado has named "floating observation" (Delgado, 1999, pp. 49–50), which implies a vigilant yet unprejudiced attitude to life, an abductive way to interpret the world, a constant search for patterns and unsuspected disjunctions to re-signify lived situations.

Veà Vecchi has further elaborated on the concept of the unusual in relation to children's creative thinking, stressing that it can only emerge from daily experience, right at the border zone of tension between human rationality and imagination, between the cognitive and the expressive (Vecchi, 2010, p. 6). By depositing creativity from the sacred podium of art, Reggio Emilia's attitude towards the unusual should be thus considered an aesthetic that becomes an ethic, a morality that materialises through everyday choices. One may argue that it even becomes an epistemological claim, one that injects a beat of life into our approach to the world. Ultimately dependent on a subjective reaction, this beat of life is not simply out there, but needs to be internalized to actually exist. Its poetic essence is only grasped through an embodied encounter with the physical world; it is experiential and unexpected per se. Consequently, it is also uncertain; it cannot be really known until it happens.

⁷ This idea was first proposed in Hoyuelos (2005b) and further developed in Hoyuelos (2006).

Finding a Gap: Main Goals and Method of Inquiry

On this basis, this paper defends that Malaguzzi and his team always relied on a series of favourable spatial conditions to make the unusual more probable, as if a physical stage could be prepared to kindle the unexpected. Evidently, for this ‘awaiting mood’ to flourish, one must feel a positive connection with the physical surroundings; otherwise, “with no intense empathy for a place, it is hard to see beyond the usual” (Cavazzoni, 2010). Accordingly, the following research methodology is proposed: if we replace the term ‘pedagogy’ with ‘physical learning environments’⁸ in Hoyuelos’ above-mentioned statement (“building pedagogy means dreaming the beauty of the unusual”) a compelling hypothesis emerges, giving space the right to dream the beauty of the unusual, too.

This hypothesis, as metaphorical as it may seem, seeks to prompt a rigorous inquiry in line with the current academic “demand for a more pedagogically supportive school architecture” (Fisher, 2016, p. 177) and tries to do so in a two-fold manner. On the one hand, it aims at raising awareness among policy makers, politicians, educational practitioners and families about their environmental competence, understood as “the ability to understand and effectively use physical instructional space for a pedagogical advantage” (Lackney, 2008, p. 133). On the other, it aspires to bring architects out of their bubble, recalling them that building design does not determine the teachers’ practice (Oblinger, 2006; Woolner et al., 2007) or even more blatantly, that “buildings alone are not enough; it is about relationships and changing cultures and practices” (Blackmore et al., 2011, p. 37). Ultimately, this hypothesis brings to the fore the urgent need to intersect the expertise of professional and vernacular designers—in Miller’s terms—to create an inspiring and productive shared language among all the stakeholders, drivers and beneficiaries of learning environments.

In this line, ‘the beauty of the unusual’ may function as a new key term to be added to the list of eight principles with which Fraser and Gestwicki (2002) tried to explain the performance of Reggio Emilia’s physical environments as an especially-successful third teacher: aesthetics, active learning, collaboration, transparency, bringing the outside world in, flexibility, relationship and reciprocity. In fact, it may act as a critical lens that holds all these principles together, a bridging topic across disciplines that can play a major role in the consolidation of a meaningful shared vocabulary.

This research is partly supported on literature review and archival research, but most importantly, it relies on the personal experience of the author as an architect, who has visited Reggio Emilia in various occasions and has carried out several interviews with some of the main characters that still remember the original history of this unique educational experience, long before it became internationally renowned and somehow converted into a successful ‘pedagogical recipe’. The next

⁸ This paper assumes OECD’s definition of physical learning environment as “the physical spaces (including formal and informal spaces) in which learners, teachers, content, equipment and technologies interact” (OECD, 2017, p. 4).

pages will thus try to provide a reflective answer to two main questions derived from the departing hypothesis. First, what are the basic preconditions for the ‘dream of the unusual’ to grow in the minds of Reggio Emilia’s school dwellers when perceiving and interacting with their physical environment? And second, are there any specific design and spatial devices that can help this dream to come true? Accordingly, the first two sections will focus on those language and time-perception strategies that have proven key to producing an effective ‘awaiting mood’ in pursuit of the beauty of the unusual. Strategies that constitute an imperative point of departure for the physical environment to act as a real “change agent”, in Oblinger’s terms (2006). Subsequently, the other three sections will delve into specific spatial and design devices aimed at creating a palpable ‘awaiting stage’ to foster such awaiting mood and make it even more active. Ultimately, these devices, found in both historical and contemporary Reggio schools—and more importantly, tested by both professional and vernacular designers—point to the construction of a sophisticated learning environment where, paradoxically, the unexpected can be expected.

Linguistic Strategies

In Reggio Emilia schools, the faith in the built environment as a generator of unusual beauty has always been, first and foremost, supported by a series of linguistic associations, namely metaphors. Metaphors were in fact introduced by Malaguzzi himself, who saw them as linguistic and symbolic transgressions that establish new relations, interpreting one concept in terms of another (Hoyuelos, 2006, p. 174). Accordingly, educational buildings have often been described as ‘workshops’ (Ceppi & Zini, 1998, p. 40) or ‘integral living organisms’ (Edwards et al., 1993, p. 62), an idea that back in the 1960s helped to surpass the canonical school model for young children dominant in those years, often stuck in the modernist ideal of ‘garden cities’ for children.

Apart from the term *atelier*, an especially remarkable metaphor for the Reggio approach emerged in the 1970s, when it became clear for teachers that the central halls around which the kindergartens were organized only functioned as circulation spaces and were usually rather unattractive for children to linger in. Then, a research project was commissioned to the architect Tullio Zini, who put together an interdisciplinary team and carried out a quantitative and qualitative assessment of how these places were used at different times of the day, on the lookout for functional and symbolic deficiencies. After the analysis, they realized that one of the main problems lay in the fact that the space was too empty. So, working with teachers and parents, the architect began to handcraft prototypes for unconventional pieces of furniture, almost like urban sculptures, and in doing so altogether re-signify the heart of Reggio’s old schools (Zini, 2010). As a result of this effort, the hall was conceptually transformed “and the metaphor of the *piazza* came to be used” (Vecchi, 2010, p. 84) (Fig. 1).

Nevertheless, identifying the old hall with a new term, even filling the space with new furniture, was not enough for the metaphor to work. A *piazza* can easily become an *atrium* if it is not used as such. Consequently, the entire staff in Reggio Emilia

Fig. 1 Central *piazza* at Diana School. Photo: Giovanni Piazza, courtesy of Tullio Zini



was and still is carefully trained to cherish every detail, gesture and behaviour supporting such an impossible trope (Cavazzoni, 2010). Only in this way can the *piazza* trigger unexpected social encounters and learning opportunities where the beauty of the unusual can be grasped.

Beyond its actual materialisation, the metaphorical *piazze* of Reggio schools vividly demonstrate how some primitive linguistic devices may function as powerful destabilizing machines against univocal structuring of physical places, being “capable of guiding new models for inhabiting space” (Vecchi, 2010, p. 91). Ultimately, they are reminders of how metaphors shape our perception of the world, raising expectations that become part of our unconscious everyday life, influencing our attitudes and behaviours, inducing dispositions to interpret and use buildings in diverse ways (Lakoff & Johnson, 1980). Likewise, they are reminders of how children, even more intensely than adults, perceive a non-differentiated, vague reality; a reality where the limits between objective and subjective are blurred; a reality imbued with an emotional flow of affection (Cabanellas & Eslava, 2005, p. 31).

Further exploring the power of the metaphor, the project *Children, Spaces, Relations* had the ambition to “find words and concepts to represent an environment (...) removed from those more generally to be found or imagined in services for children” (Vecchi, 2010, p. 89). The outcome of this research included a glossary of bizarre terms—such as ‘bradyseism’, ‘epigenesis’ and ‘osmosis’—extracted from diverse scientific fields, ranging from geology to chemistry, and aimed at challenging traditional views on educational spaces.⁹ In this sense, it could be stated that these daring analogies have been used since then by architecture practices in Reggio Emilia as productive catalysts for school design; but just as much, they have encouraged teachers and public servants in charge of educational policies to look at architectural projects through a fresh and optimistic lens.

⁹ ‘Bradyseism’ suggests an architecture of small effects and chorality, invisible at first glance and only perceived in the long term. ‘Epigenesis’ calls for architecture’s ability to adapt and evolve. ‘Osmosis’ reminds us that schools should not be isolated worlds, but the essence and distillation of society, with a permeable membrane and interface.

Fig. 2 Children's natural tendency to 'texturize' time.
Photo: Michele Zini, courtesy of Tullio Zini



Time-Related Strategies

A second group of preconditions to make the unusual more probable relates to Malaguzzi's understanding of time. In this regard, even though the school day was always organised by rhythms and scheduled projects, this pace did not isolate what is educational from what is not. Rejecting the separation between playing and learning, Malaguzzi never accepted a system of cells and bells calling children from the playground back to class and vice versa. Instead, he advocated indefinite duration of school projects, the so-called *progettazione*.¹⁰ And just because a project might need a morning, a month or a year to be completed, teachers came also to understand that a physical place might require a while to incite a child to appropriate it and see beyond its immediate purpose. This place can be a corner in the *atelier*, a hideout under the stairs, a tree-house in the garden or a shadow on the kitchen floor; every niche of the school is allowed to inspire valid learning experiences.

Additionally, thanks to the small size of school buildings in Reggio Emilia and to the inexistence of marginal rooms, doors were usually left open, letting children move around freely if the activity admitted it. The freedom of movement already achieved by Maria Montessori's 'prepared environment' was pushed further here, dispensing with pre-organised schedules and appropriating hitherto secondary areas.¹¹ Convinced that children do not follow clock measurements—their time

¹⁰ For a synthetic explanation of the meaning and scope of this term, see Fraser and Gestwicki (2002, p. 303).

¹¹ Maria Montessori's 'prepared environments' were already arranged to support the child's need for independence, freedom of movement and choice, but they were generally applied only to enclosed classrooms.

being that of the occasion and the opportunity of moments—Malaguzzi encouraged the act of ‘texturizing time’ by adding a strong performative quality to space (Hoyuelos, 2008, p. 14). Accordingly, the physical environment was and still is seen in Reggio Emilia both as a physical place and as an experiential opportunity, inseparable from its temporal nature (Fig. 2).

Another key time-related concern for Malaguzzi has to do with the concept of inertia. He actually believed that inertia was the greatest enemy of education, responsible for making schools incapable of incorporating research and experimentation (Hoyuelos, 2005a, p. 158). In response, school communities in Reggio Emilia have learnt to understand that their buildings should change and evolve in accordance with the cultural project of those inhabiting them. Thanks to a trial-and-error optimism, obstacles and traumatic events thus lend themselves to becoming opportunities for research. As a case in point, right after a fire destroyed the mythic Diana School in the late 1970s, teachers and architects decided that they could not simply reconstruct the old building. Instead, they took the chance to test an innovative spatial system that had been in the back of their heads for some time. This is when the ‘mini-ateliers’ and ‘third spaces’ of the classrooms came into being.¹²

Paradoxically, we could say that the only constant value in Reggio Emilia’s built environment is the awareness of change; a spiral interaction that should be able to (re)construct both individual and collective identities, attentively cared for by all spatial agents and inevitably amplified by children themselves. In other words, dynamism becomes the “basic operative and cultural condition of space” (Ceppi & Zini, 1998); a space that is understood as responsive and open to receiving imprints; a space that must be not only potentially transformable, but also factually transformed.

Non-reductionist Dualities

In regard to specific design devices for the promotion of the unusual, it can be said that Reggio schools have discovered a territory of special success in the undermining of traditional spatial dualities. Just as Malaguzzi incited teachers to challenge false dichotomies that affected education, such as art-science, child–adult, individual-community or enjoyment-study, so the organization of space and objects in these buildings suggests looking beyond simple dualisms, establishing a non-binary dialogue between the two terms at play, and eventually producing more powerful aesthetic vibrations in our approach to the world.

A first undermined dichotomy which is quite frequent in Reggio schools stems from accepting children’s right to ‘cool off’ from social life. In architectural terms, this involves for instance designing attractive corners in which to hide and rest in private, epitomised by the ‘third space’ of the classroom but also translated into a

¹² The ‘mini-atelier’ brought the work of the *atelier* into the classroom; it was a small space integrated in the same room or adjacent to it, with sufficient material to introduce creative opportunities into daily activities. The ‘third space’ was also a new subdivision of the classroom. This time it was understood as a quiet zone with low light levels, to allow children to rest.



Fig. 3 Dressing-up unit at Diana School. Photo courtesy of Tullio Zini

series of micro-architectures—or *grandi oggetti*, as Malaguzzi named them—scattered around the buildings. The dressing-up unit, for instance, allows an intimate action (disguise and self-transformation) to take place in the middle of the *piazza*, the epitome of public life (Fig. 3). The famous triangle of mirrors, the peek-a-boo corner and the puppet theatre are also interpreted by children as places for hiding, lying down, or reflecting. Their flexible position is a statement on how children should be provided with privacy even within the school's most public realms.

Fig. 4 Superimposed transparencies and blurred reflections at *Centro Internazionale*. Photo: Daniele Mauro, courtesy of Tullio Zini



Another critical reflection on spatial dualities relates to the fact that in most of these schools, univocal enclosures—either glassed or opaque—are quite rare. Instead, if a temporal subdivision within a classroom is required, it is usually fabricated with paper partitions, tissues, plastic or perforated steel sheets. Likewise, when a permanent glassed enclosure exists between different rooms, it is always complemented by filters that have the effect of enriching the experience of looking through. In this sense, the recurring display of children's work on exterior windows is not coincidental: they are considered a source of unusual beauty and produce an (un)predictable play of reflections and shadows for children to observe. Furthermore, superimposed transparencies are widely tested. This is what happens for instance at the first phase of *Centro Internazionale* in Reggio Emilia, designed in 2000 by ZPZ partners, where, standing in the middle of a classroom, one can see through a screen-printed glazing, cross a courtyard, peep into an adjacent space and still spot a friend playing at the *piazza*, on the other side of an organic-form window. In short, although many have claimed transparency as one of the main design principles of Reggio schools (i.e. Fraser

Fig. 5 Winter gardens, *nido* Rodari. Photo: Michele Zini, courtesy of Tullio Zini



& Gestwicki, 2002, pp. 115–117), this statement should be refined, through the conscious value given to blurred reflections and deceptive visions as a means to develop children’s sense of depth and critical curiosity in all its complexity (Fig. 4).

Worth mentioning as a third spatial duality critically undermined by Malaguzzi’s educational philosophy are the provocative leaks allowed and even encouraged between indoor and outdoor spaces, which have become the perfect excuse for the unusual to emerge. This is how the *piazze* of most Reggio schools tend to be invaded by all sorts of plants, while some of their choices of material—such as ceramic tiles for internal pavements—contribute to creating strikingly singular atmospheres, neither completely indoors nor really outdoors. In the 1990s there was an attempt to further fade this limit between interior and exterior through glass doors, verandas and winter gardens, like in the *nido* Rodari (Fig. 5). In the 2000s, projects like the Giulia Maramotti kindergarten even explored the potential of movable structures that could slide away from each classroom through rails on the ground. These bizarre detachable spaces admitted no clear definition: they were neither rooms nor just pergolas—surely an experimental step in a promising direction. Still, one of Reggio Emilia’s future challenges lies in integrating the design of exterior spaces along the construction process of new schools, fighting against budget restrictions that tend to neglect any object of design that escapes from the building’s walls.

As a further consequence of dealing with dualities in a non-reductionist way, special attention is also given in Reggio Emilia to the design and use of thresholds between distinct spatial realities. It is widely proven that small kids feel specially attracted to such intermediate spaces, “areas of truce where they stop to understand where they are, observe what happens around them, being very attentive to spatial messages” (Cavazzoni, 2010). A simple act like positioning a puppet theatre right outside a classroom’s door becomes an opportunity for children to ‘stumble’ on wonderment. This happens for instance at Diana School, where teachers always thought that such mediating position for the theatre had a great potential, even though in functional terms it obstructed movement to toilets. The bulky obstacle was thus seen as a positive disturbance, one with the potential to increase opportunities for impromptu encounters among children (Zini, 2010).

Fig. 6 Exploring the mysteries of food preparation. Photo: Alessandra Chemollo, courtesy of Tullio Zini



In the same line, Reggio schools have developed an intermediate space directly connected to the kitchen where children help cooks, exploring the mysteries of food preparation. This semi-enclosed area was conceived by Tullio Zini in the 1990s as a further evolution of Malaguzzi's open kitchens.¹³ Half kitchen, half *atelier*, half dining-room, half *piazza*: this is another effective threshold to kindle the unexpected while experimenting with ordinary things (Fig. 6).

Illusion

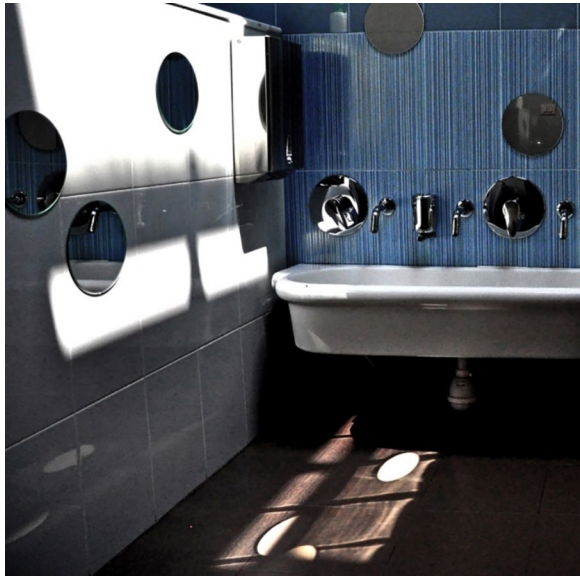
Human perception is often deceptive, a fact valued in Reggio Emilia as an extraordinary source of unusual beauty. In this regard, mirrors are cleverly manipulated to make young children question what they see, even about their own identities. These mirrors are usually cut into small pieces of various shapes in order to give them exceptional significance, especially in bathrooms. They are also associated with movement, covering the sides of transportable charts and being integrated on doors, a simple decision that disrupts the conventional action of entering a room while offering an unsteady perception of the surrounding environment. This idea is pushed further by the incorporation of distorting mirrors in partition walls and in the interior of *grandi oggetti* like the triangle of mirrors, where reality is deconstructed

¹³ According to Malaguzzi's idea of non-marginality of rooms, kitchens have always been well integrated within the schools' spatial schemes, and so have cooks within the educational staff (Hoyuelos, 1990).

Fig. 7 The triangle of mirrors. Photo from *Play+Soft: Arredi per l'infanzia* (2005), courtesy of Tullio Zini



Fig. 8 Appreciating reflections beyond mere functionality. Photo by the author



into infinite planes, suggesting broken views of the self and journeys to impossible places (Fig. 7).

Combined with natural light, mirrors can also exaggerate their optical illusions: long narrow panes are often placed in strategic locations, seizing sunrays through skylights and reflecting them back to the floor. This may produce disturbing glitters in conventional activities, but teachers seem to prefer to dodge lighting regulations and continue ‘dazzling’ the children in both literal and metaphorical ways (Fig. 8). All these perception games—further explored at the *Atelier Raggio di Luce* since 2009¹⁴—uphold the

¹⁴ The *Atelier Raggio di Luce* was presented at the Genoa Science Festival in November 2005 still functions today at the *Centro Internazionale* in Reggio Emilia. Thanks to a multidisciplinary group of *pedagogisti, atelieristi*, architects and scientists, it encourages children to experiment with some of the qualities of light and become familiar with its functional grammar.



Fig. 9 Abstract shapes, open meaning. Photo from *Play+Soft: Arredi per l'infanzia* (2005), courtesy of Tullio Zini

power of doubtful thinking to construct valid meanings: yet another of Malaguzzi's battles against the idea of school as transmitter of univocal knowledge.

Beyond optical effects, illusion can also be read as the opposite of the illusory. As Antón Capitel (2001) noted in his original account of modernist architecture, certain forms are somehow capable of housing the figurative without abandoning abstraction; they can represent something not physically present, and still endow an existing space with strong symbolic associations. Many visitors to Reggio schools are impressed by the scarcity of figurative toys, Disney-like decorations or flashy didactic material. Instead, they find very abstract objects and 'raw materials', diversely combined and structured by children according to their desires and imagination. Such a choice suggests that a deeper creativity arises when meaning is constructed from loose suggestions, rather than from univocal readings. So it is that among Malaguzzi's original *grandi oggetti*, there was never a typical house, but only protective spaces that could be sometimes a house, sometimes a theatre, sometimes a den in which to hide. This also explains the furniture collections developed in the last two decades by PLAY+, a company founded in 2001 in collaboration with Reggio Children and the *Atelier 3* line of furnishing by ISAFF (Italiana Società Arredamenti Fratelli Fontanili), both based on abstract shapes and flat colours.

In short, the Reggio approach harnesses abstraction as a way to engage children with minimalist designs and raw materials, deliberately open-ended in terms of symbolic meaning. Through deeper connections between mind, perception and bodily interaction, the effect of illusion is rather effective: it sparks associations between non-representational forms and personal imageries (Fig. 9).



Fig. 10 Encouraging bodily interaction in ‘big spaces’. Photo: *Asilo nido Rodari*, courtesy of Tullio Zini

Fig. 11 Beyond the traditional utilitarianism of the toilet area. Photo by the author



Insolent Choices

As yet another strategy to kindle the beauty of the unusual, the Reggio approach encourages a nonconformist, even impertinent, use of space. In keeping with Malaguzzi’s view of education, it is assumed that architecture must respect the rights of children, but at the same time promote the pleasure of causing a scandal, as much as pedagogy will permit (Hoyuelos, 2006, p. 124). This optimism over the transgressive potential of spatial practices is a key antidote to educational routine and indifference, which Malaguzzi profoundly despised.

On this line, schools in Reggio Emilia tend to undermine a widespread cliché about scale, the belief that small children need smaller spaces and big children, bigger spaces. Wary of overprotection, the inhabitable volume of kindergartens has been increased whenever possible, including double heights, ramps and spiral stairs. Experience has taught educators and architects that young children are neither that shy nor unwise when encountering big spaces. As part of thinking beyond teachers’

Fig. 12 Rediscovering pieces of waste through the luminous table. Photo: Tullio Zini, courtesy of Tullio Zini



convenience and parents' fears, toddlers have been thus given the right to have 'big adventures', and seem encouraged to interact with space with their whole body, all their senses and from multiple perspectives (Fig. 10).

Another insolent attitude cultivated in Reggio Emilia refers to object de-contextualisation. This means allowing certain pieces of furniture to move away from their expected places, and thus disconcert the rational mind. Hence, armchairs may be found in front of toilet areas; a subtle yet strong manifesto against the marginality of servant spaces. Somehow, this bizarre link between the living-room character of armchairs and the traditional utilitarianism of toilets confirm children that there may be other valid ways of signifying wet areas, just as many as they can think of (Fig. 11).

In a parallel effort, since the founding of Remida in 1996, Reggian teachers have been working on re-contextualizing much smaller objects, from pieces of mundane refuse to recycled materials and natural elements.¹⁵ Every school day, a large variety of these objects are removed from their original contexts and rediscovered by children on luminous tables, in the conviction that waste materials can be resources for handicraft work. Thanks to the aesthetics of the unusual, they are transformed into precious treasures with an altogether new meaning, be it aesthetic, social, cultural or economic in nature (Fig. 12).

¹⁵ Remida (Reggio's Creative Recycle Centre) is a joint project of the Municipality of Reggio Emilia and AGAC (gas, water and garbage collection utility), managed by the Friends of Reggio Children Association. It promotes the idea that waste materials can also be resources for handicraft production, aimed at reinventing aesthetic, social, cultural and even economic meanings.

Conclusions: The Challenge of Contingency

Although this account of Malaguzzi's philosophy and the Reggio Emilia approach may sound too subjective and even hagiographic at some points, it should not be taken as such, but rather as a quite serious invitation to turn upside down our common understanding of physical learning environments from a critical standpoint. This specific case study was thus taken as an opportunity for discussing and theorising upon a more general theme: the potential of a committed aesthetic and spatial sensitivity for educational purposes; a sensitivity that must be shared and cherished by all involved agents for it to be effective, based not only on a strong confidence in the capacity of children to make amazing observations—and transformations—on their environment but also in the potential of environmental awareness on the part of educators, families, politicians, and society in general. It may be true that Reggio Emilia's schools are used in an extraordinary way, but this quality of usage would never exist without a parallel culture and a strong engagement on the meaning of spatial practices. An engagement that was born in this region's post-war public kindergartens thanks to a unique collective project and that was able to imbue the whole community with a predisposition to face the most ordinary faces of learning without prejudices, looking out for the unexpected to happen—something that children already do in a natural way.

Together with the inspiring issues that the different strategies analysed above may raise for educators—including uneasy questions recalling their necessity to increase their environmental competence—this paper's transversal approach has also shown that the desire to be 'buffeted' by the unusual may lead to a highly disconcerting challenge for architects and designers. Somehow, the success of Reggio's physical learning environments depends on the unforeseeable accidents that they are able to provoke; accidents which are contingent and uncertain per se. This goal is in fact quite unsettling, considering that one tendency of architects is "ridding the world of contingency so as to better manipulate that world into (a semblance of) order" (Till, 2009, p. 37). To put it another way: even when praising indeterminacy, architects are unconsciously tempted to design models to control it.

At this point, it is necessary to again drive home a crucial issue: although the beauty of the unusual is contingent per se, not all contingencies are beautiful, especially in educational contexts. To have faith in contingency is not to praise chaotic accidents simply by virtue of their unpredictability. This means that even if young children naturally tend to multiply the level of uncertainty, Reggio educators were always and still are well aware that desirable contingencies are not achieved by sheer chance. In other words, they know that it is hard for an environment, if not carefully thought out, to be highly suggestive. Accordingly, both professional and vernacular designers in Reggio Emilia know that certain disturbances are more reliable than others in turning into attractive learning opportunities—even with uncertain results that may catch us off guard. Relying on an intricate combination of rather simple spatial features, these schools are somehow prepared as an unsteady equilibrium where any little turbulence could produce a

noise in the inhabitants' field of experience, and thus disrupt their unconscious dwelling inertia. Hence, Reggio's aesthetics of the unusual ultimately suggest that although contingency will never be designable, certain enticing ambiguities are worth fostering.

One may suspect that this suggestion is just another false dream of eradicating contingency from the designer's table. A picture of any of these schools' *ateliers*, with delicate aerial sculptures, exquisite plants and meticulous material arrangements, may raise doubts as to whether this apparent informality is just the result of a pre-established plan. However, it is quite the contrary. These places need to be freely manipulated for us to consider them beautiful. That is, their beauty only emerges through combined actions, making it extremely hard to distinguish between designers' proposals and users' initiatives, between the organization of the perceived world and the action over it, between professional and vernacular designers, once again. Space is thus something that cannot be separated from the activities of its occupants; something that resides largely in the operations (and imaginations) of its inhabitants; something that is mainly constructed through the choral effect of small actions.

Finally, one realizes that it is not by coincidence that most of Reggio's design strategies in relation to the unusual were first tested in old buildings through spontaneous spatial practices, then verified in modest refurbishment projects, and only later corroborated in the design of new buildings. Only by accepting this paradigmatic shift about the power of space, architects, educators and any other agents and stakeholders involved in the creation, use and transformation of physical learning environments may really pull in the same direction. This is, in sum, the ultimate general lesson that should be drawn from this speculative and somehow unorthodox academic research.

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