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The Prepared Environment. A suitable environment design: The Flowerssocki case

Abstract. The Flowerssocki project is the outcome of the long intellectual search of two architects who have decided to make a fresh start involving the ethics of the “real”, and to place their bets on the future, that is on children. The feel for nature and the fascination exerted by the world of Maria Montessori were both consequential of and synergetic with the determination to develop a new type of environment.

Keywords: Montessori, prepared environment, children design.

**“The things he sees are not just remembered;
they form a part of his soul” (Montessori 1949, pp. 56)**

The Montessori Method encourages the teacher to give maximum importance to the learning environment, since this is perceived as the medium through which he or she helps the child to engage attention and concentrate (Rathunde 2001, pp. 29–30). In the last few decades accurate researches have proved what expert pedagogists have long been asserting: infants and children learn more rapidly in stimulating and varied physical environments. Architecture and interior design settings can facilitate the transmission of cultural values, stimulate or subdue, aid creativity or slow down mental perception; they can cause fear or joy. “There cannot

be separation between the learning process and the physical environment – they are integral parts of each other.” (Taylor 1995, pp. 46–54).

The implications of this statement are now really impacting on the characteristics of the space that we set up around the child. It has so much to do with complex emotions and subtle mental associations that nothing can be taken for granted.

And furniture plays a crucial role in this scenario.

Our interest in the Montessori Method stems from our roots in Chiaravalle, the town where Dr Maria Montessori was born and from a genuine passion for her philosophy. From here, a slight professional bias, considering that we are architects, led us to outline those aspects of Montessori pedagogy most closely connected to our job.

Four years ago we started researching how the Montessori Method is currently being applied to school spaces, on both the national and international scene. Having surveyed those firms that specifically produce furniture schools, we discovered that over the last decades the exploration of new design has drastically decreased.

The furniture currently being produced still looks like that produced during the 40’s and has not therefore been in any way upgraded taking into consideration new standards of beauty and changing perspectives of taste. Arguably, this clashes significantly with Montessori philosophy, which clearly states that children appreciate beautiful things and tend to learn better in an aesthetically pleasing and stimulating environment rather than in a boring, standard-made environment.

“...what is above all essential is that it should be ‘artistically beautiful.’ In this case beauty is not produced by superfluity or luxury, but by grace and harmony of line and color, combined with that absolute simplicity necessitated by the lightness of the furniture” (Montessori 1917, pp. 142).

Moreover, as Maria Montessori hoped:

“...”types of furniture” might arise which would in themselves do much to elevate the taste and refine the habits. They would bring to the enlightenment of the world an educational mode” (Montessori 1917, pp. 145).

A contemporary architect could not find better words to express this concept than those of Maria Montessori herself in 1917.

These are the reasons which lie behind the conception, development and production of Flowersori. In addition to the lack of diversified op-

tions that the market is giving in the field of Montessori furniture, we have registered not only a scarcity of appealing products, but also an impoverishment of function and as a result a progressive detachment from certain basic aspects of the Montessori Method. Drawers, for example, have been completely discarded in favour of shelves; the ergonomic (an important concept for Dr. Maria Montessori) reduced to very little more than the most basic of schemes; plastic and metal have gained the first positions as the preferred structural materials for chairs, tables and beds, almost entirely replacing wood. There is no doubt that the reasons why this has happened lie in the dichotomy that has opened up between standardization and industrialization, which has been systematically pursued for the purpose of lowering production costs.

Flowerssori proves that is possible to obtain a real Montessori design with a contemporary take by developing its characteristics from the heart of the Method itself (Flowerssori 2014). We have, we believe, reached this target by going back to the concepts that Maria Montessori illustrated in her books and researching the first furniture samples carried out under her careful supervision (Fig. 1).

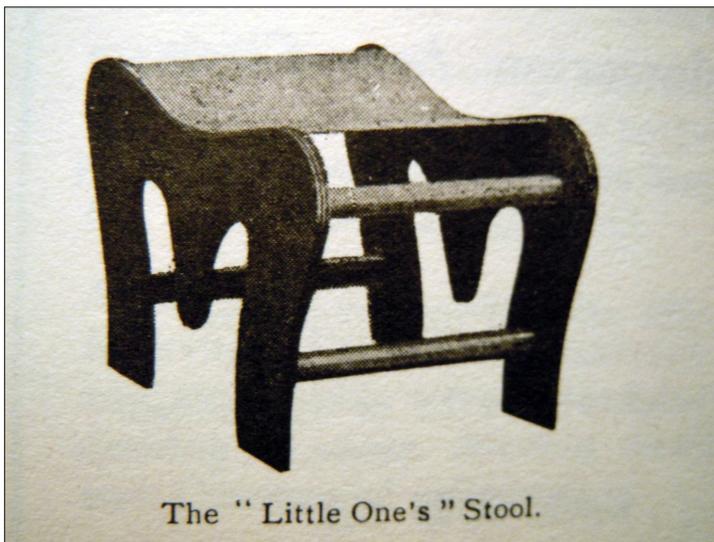


Fig. 1. An original Montessori stool of Philip & Tacey Ltd Fulham, London, ~1913

(Honegger Fresco 1993, p. 139).

In a brief overview of these, in her “Spontaneous Activity in Education”, Dr. Maria Montessori described the characteristics which she considered necessary to set up a proper school space. The Montessori school environment is inspired by the modern house, with different, special spaces where children may concentrate, grow calm, play, think and work according to their individual time and rhythm.

Child-sized furniture helps children to move freely, be self-motivated, independent and choose the activity they want to carry out and the material they want to play with.

Chairs and tables, in the Montessori Method, are conceived as light enough to be removed directly by the child, in order to naturally develop his/her sense of discipline. Besides, being intentionally a bit noisy if bumped into, this furniture draws attention to uncoordinated movements or stumbling, which allow children to perceive the physical limits of things.

Furniture colours are mostly light so as to make stain marks evident and also to allow Montessori materials to stand out in the environment.

The distinctive characteristic of Montessori furniture is that of being appealing, simple and well proportioned. It has to be made of wood and washable, so that it may be easily cleaned by children (an exercise that Dr Montessori considered highly educational).

Style and aesthetically pleasing design are therefore two essential aspects of Montessori furniture. Its appeal rests, however, not in formal excess and luxury materials, but in the balance achieved between simplicity and harmony of shapes and colours.

As Dr. Montessori reminds us, “Beauty both promotes concentration of thought and offers refreshment to the tired spirit” (Montessori 1917, pp. 142–153).

Flowersori has reunited these characteristics into a line of products that has been exclusively conceived for children and suitable for nurseries, preschools, homes, museums and hospitals, due to the 99% anti-bacterial varnish on its surface (Fig. 2).

Attention to nature and appreciation of the Montessori method are the main themes of a design resulting from long reflection on the quality of children’s furniture, conducted by a group of architects.

The furniture in the Flowersori collection is not a mere scale reproduction of patterns “for adults” but as objects specifically conceived

and designed for children, considering their specific nature in terms of ergonomics and cognitive and sensory sensitivity.



Fig. 2. MiniTree, the UniCredit nursery in Milan set by Flowerssori

Having proportions that are commensurate with growing users, all the furniture elements in the collection are made in various sizes, and are thus ideal for different age ranges. Sharing soft and flexible shapes, they are made of ash which is rotary cut from a single sheet; the top surface of each element is finished with a layer of light ash, characterized by tones ranging from gold to silver, while the lower is characterized by an olive colour.

This alternation, designed so that children can instantly perceive the idea of “inside” and “outside”, is not re-created artificially but is a result of the wood machining process. The chairs also have an innovative stacking system which has been patented: this effectively solves the problem of storing the chairs and is in itself a part of the playing process.

In addition to an Italian Design, its strengths lie in its being hand-made, its total sustainability, and its lack of plastic or metal inserts. Flowerssori is entirely made in Italy and specifically developed by a team whose leader was born in Chiaravalle, Maria Montessori’s birthplace.

It is a product, we feel, that embodies a truly natural and experiential design – to feel its soul it must be touched.

The particular bending of the objects accentuates the light reflected on their surface and stimulates sensory perception of the physical limit of shape and material.

Inside each single element there is no trace of iron or plastic, but only wood and glue to the lowest content of formaldehyde.

Ash wood, which forms the outer surface, is unrolled in a single sheet and has no seams, so to enhance its “history” and materiality.

Each Flowerssori element interprets the needs and pedagogical aspects of the educational world inspired by the Montessori Method, where ergonomics is not only a matter of shapes but it’s the child’s awareness of his relations with the world.

Our woods are carefully selected and come from PEFC certified European forests. In Europe, the PEFC certificate is founded on three basic principles: caring for the environment, respecting cultural rights and traditions, promoting economic sustainability and forestry. Flowerssori’s worldview is rooted in sustainability: we only employ woods and glues with the lowest environmental impact.

The ash, rolled out into a single leaf, has no joints, thus allowing the life itself of the tree to be projected onto a surface which forms a part of the daily life and consciousness of the child.

In Flowerssori the designed object comes to life through the work of the skilled hands of artisans who transform each piece into a unique exemplar. Made in Italy is synonymous with a high degree of technological expertise and elegance. Each detail is carefully considered from the start – from the design on paper to the mould – nothing is left to chance. No longer simply an object for everyday use, each piece of furniture becomes everyday a true sensory experience.

Flowerssori design is an invitation to action and expression through which the child will be able to feel and experience living nature.

Since we wanted to have a direct feedback from our young users, our line has been tested for over six months in Canada, in the HumberSide Montessori School of Toronto (ON), run and own by the President of MSC (Montessori Society of Canada), arch. Felix Bednarsky. There, children every day got a chance of interacting with the Flowerssori’s elements (Fig. 3).



Fig. 3. Flowerssori furniture in Humberside Montessori School (Toronto-ON) 2011/2012: the Test. The first items of furniture show up in the hall

Day by day, children started carefully to observe, touch and experiment the new prepared environment, at the same time testing their own feelings about it. The comparison between the traditional plastic chairs they already had in their classroom and the new chairs, resulted very fascinating and attractive for them. (Fig. 4)



Fig. 4. Flowerssori furniture in Humberside Montessori School (Toronto-ON) 2011/2012: the Test. Comparing the old seat to the new seat

The tests were taken by children very seriously and all the different characteristics of the new furniture were taken in consideration, as flexibility, comfort, accuracy of the manufacturing and so on (Fig. 5)



Fig. 5. Flowerssori furniture in Humberside Montessori School (Toronto-ON) 2011/2012: the Test. A dynamic ergonomic

The results of this test have allowed us to improve the shape and the performance of our furniture and has significantly led us to win such an important award of the international design field as the ADI Design Index Award (ADI Design Index 2015).

ADI Design Index is the publication of ADI, the Italian Association for industrial design, that collects, year after year, the best of Italian design put into production, selected by ADI Design Permanent Observatory. This commission of experts, designers, critics, historians, specialized journalists, ADI members or external to it, is continuously engaged in collecting information year after year and in valuing and selecting the best products that may be published on the ADI Index 2013, that actually also consists in the pre-selection for the extremely prestigious design award Il Compasso d'Oro (Fig. 6).

Established in 1954, ADI Compasso d'Oro Award is the oldest and most influential international design award.



Fig. 6. The pages dedicated to the Flowerssori project in ADI Design Index 2013. The greatest honor? Being just one page before the F12Berlinetta of Ferrari designed by Pininfarina!

Arisen by a Gio Ponti's idea, the award was organized for years by "La Rinascente" department store in order to pick out the value and quality of the Italian design products. Later it was given to ADI that, since 1964, has managed its organization, ensuring its impartiality and integrity. The nearly three hundred products awarded in more than fifty years, along with the almost two thousand products selected with the Honorable Mention, are collected and kept in the Historical Collection of the Compasso d'Oro Award, whose management was given to ADI Foundation, created for this reason by ADI in 2001.

With a step that has no precedent anywhere else in the world of international design, the Italian Cultural Heritage Ministry, Regional Office for Lombardy, with a Decree dated 22 April 2004, declared the Historical Collection of the Compasso d'Oro Award to be "of exceptional artistic and historical interest" and included it in Italy's national heritage.

Flowersor has been selected for the category “Design for Living” and also included, with only few other firms, in the prestigious section “Design for all”, in which particular attention is paid to products that express respect for the environment, public and social value, care for the usability, the interaction and the concept of what can be defined a “design for all”.

Here it is reported the description of the project as presented on the publication.

“This project is the result of a long period of research carried out by professional architects into the theme of furniture for children. Attention to nature and a passion for the Montessori Method consequentially led to a synergic desire to develop solutions that were non simply a down-scaled version of adult products, but objects designed around the ergonomic and sensorial nature of children. The furniture is created from a single sheet of rotary cut veneered ash; the surface layer of the objects is finished with a sheet of clear ash, while the lower layer has an olive tone. This alternating was thought up because children immediately understand the concept of “inside” and “outside”; it is not created artificially but is linked to the depth of the ash veneer.

Finally, the Flowersori system of stacking is a real innovation, so much so that it has been patented: it effectively resolves the problem of stacking chairs and it is in itself an element of the furniture with which children can play.

A final point: the project adopts all the necessary points covered by Design for All.”

What makes Flowersori a unique proposal on the market is not only the entirely made in Italy soul, the totally ecological and natural approach and the complex ergonomics of the full-range of its products. The main value of it consists especially in the certification of the Chiaravalle Montessori Foundation and the International Montessori Centre of Perugia, which was obtained thanks to the close and long collaboration with both the Institutions.

The International Montessori Centre of Perugia has joined soon this beautiful synergy, giving its contribution to the planning of some products and officially presenting the Flowersori project to the international school and design press. The presentation as taken place in one of the

most prestigious universities of Italy, such as the Foreigners University of Perugia, and has been strongly wanted and organized by Prof. Luciano Mazzetti, President of the International Montessori Center and known worldwide as one of the leading experts of Montessori.

These are the factors that concur into an absolutely unique, valuable, educational and scientifically studied product, conceived for the consciously independent growth of our children.

The Chiaravalle-Montessori Model School

Bringing children closer to nature and design through the use of technology for a process of consciously independent growth

Between technology and design, pedagogy and nature, Flowerssori demonstrates how one can succeed in creating, and therefore making possible in both national and international contexts, a model school that is not only the size of a child, but also sensory, innovative, technological, aesthetically appealing and economically sustainable. All in accordance with the ever authentic "Made in Italy."

A punctual study of the didactic spaces and the research of a strong relationship between indoor and outdoor make a three-dimensional interaction with the environment possible for the little patron of the Chiaravalle-Montessori school through the light, that the child can independently regulate in intensity and temperature through simple computerized systems.

Learning is thus encouraged by an environment designed to empower the cognitive capabilities of the child, through the work of a line of ecological furniture and design developed ad hoc for children that with their form and brightness are capable of helping the child to gain autonomous movement. Extra care is given to the illumination of the school environment, which plays a crucial role in letting the child find the right concentration hour per hour.

The planning of all the outdoors green spaces are very accurate (mostly intended as "open-air classrooms") and conceived as intergenerational places where different competences can pass from adults to children (and viceversa).

The ecological "soul" of the planning is enforced by the choice of using prefabricated structures in "eco-lam" wood, that are completely

eco-sustainable and cheaper than the traditional concrete and bricks structures.

Prof. Luciano Mazzetti and dr Lucio Lombardi (among the largest international experts in the world of Montessori), at the head of the International Montessori Centre of Perugia, lead the scientific and pedagogic committee that have set the guidelines of the pedagogical and didactic aspects of this project, in order to make it repeatable and adaptable to different situations and countries.

In the end, it is easy to see that the Chiaravalle Montessori model school is a proposal of a highly technological school of the future, that brings children closer to nature and design through a process of consciously independent growth.

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