

Clara Tornar, *Research Lines on Montessori Education*

In the past, the debate on Montessori education saw alternating views, in some cases ranging between extreme deconstructive criticism of and complete unconditioned adherence to the principles of the method. Over the last few decades this debate has become more balanced and geared to an explicit reconsideration, at a historical level, of the scientific activity conducted by the Italian scholar and to an actual rediscovery of the educational principles underlying her method. On the whole, however, it is particularly difficult to identify consistent and homogeneous research lines, probably because of a series of variables that contribute to amplifying the complexity of the overall picture within which the debate and the various research contributions have taken shape. This complexity is particularly linked to the diachronic and spatial dimensions within which the various variables may be placed and which, in the Montessori system, take on features of particular expansion thanks to the extension of the temporal arc along which Montessori's theoretical work has moved (the diachronic dimension) and the exceptional international resonance and dissemination of her work (spatial dimension).

Starting from these reflections, the contribution will present some of the current research lines by outlining their basic characteristics with particular reference to the application-experimental field in which of great interest is the research cue and possible applications suggested following a "re-reading" of Montessori's work in the light of the new scientific awareness emerging from studies on the teaching-learning process.

Valeria P. Babini, *Maria Montessori, from Feminism to Education*

An in-depth historical study of the scientific and intellectual training of the young Montessori allows us to focus the originality of her path as a woman protagonist of early 20th century Italy and also to trace the 'ideological' roots of her Method.

The interest for education, which became dominant in Maria Montessori starting from her experience with the Children's House in 1907, is a natural development, so to speak, of an educational demand that was already present in her view of science and the role it can play in the transformation of society.

The 'social medicine' practiced in late 19th century Rome, that aimed to defend weaker subjects of the population (handicapped children, the poor and women), was strictly connected to the political commitment in the Italian and international feminist movement of which Montessori was a member right from her university student years.

An important element in the path that would take Montessori from medicine to the construction of a new form of education was her reflection on the differences between the sexes. Recognising that the obstacles to any real equality between men and women lie in the mentality of individuals even before society as a whole, Montessori developed the idea that a real change in social reality and in customs was possible only through a radical change in education promoted by a 'new' pedagogy. As she said in a lecture she gave to students at Rome University in 1902, pedagogy would become the new social medicine.

In the first national congress of Italian women, held in Rome in 1908, Maria Montessori presented an important report on education and sexual morality in which she also maintained that the solution of feminism was linked to a revolution of the relations between men and women based on the introduction of a sexual morality with a 'feminine mark', that is to say, characterised by an idea of love which always contemplates respect for the other as a person.

Hervé A. Cavallera, *The Presence of Positivism in Maria Montessori. The Origins and Meaning of the "Method"*

The critical literature has always acknowledged the important role that the positivist Montessori teachers had on Maria Montessori and yet it is also true that the criticism has mostly focused on the subsequent developments of Montessori's positivist phase.

Indeed, when reprinting her works (and *Il Metodo della Pedagogia Scientifica* is a case in point), Montessori herself often changed and/or added substantial elements while leaving the title of the publication unchanged. This means that the internal process that Montessori thinking underwent over the years has not always been well-understood, so much so that there has been an insistence – at least for many of her followers – on the fecundity of the method without any accurate historical analysis of the conceptual elaboration.

In particular, the so-called positivist phase had a greater influence than what may appear on Maria Montessori's whole intellectual dynamics and such that the fundamental theoretical mainstays are actually identifiable in that very early period, which has sometimes been hastily treated by a more spiritualist critique that has devoted more attention to highlighting the later contributions of this famous educationist (for example, education for peace).

The present contribution instead aims to make a more accurate reconstruction of the historical period in which Montessori matured speculatively and to identify the main themes which, even with the inevitable developments determined by her process of reflection and action, constitute the basic themes of her thinking, in order to enable a more suitable historical collocation of this brilliant educationist who was, in many respects, atypical but not forgetful of a training that was, in many respects, decisive.

Giovanna Alatri, *The Montessori Method and Rural Kindergartens. "A Teacher's Diary"*

Only at the beginning of the 20th century was it recognised, at least at a theoretical level, that the state and public institutions should provide for the assistance and education of farmer's children living in the countryside around Rome. However, the municipal authorities, who barely managed to keep a few primary schools running in the main rural centres, was unable to open others in more isolated areas and, above all, to set up kindergartens for pre-school age children.

The creation of a basic school service in the Roman countryside, and then of kindergartens, was carried out by a committee set up within the anti-malaria campaign conducted in the Lazio region by Angelo Celli and his wife Anna, with the cooperation of the Red Cross, and which – besides the Cellis – also included the poet Giovanni Cena, the writer Sibilla Aleramo, the artist Duilio Cambellotti and the educator Alessandro Marcucci.

As director of the "Schools for Farmers", and on the basis of ministry guidelines, Marcucci drafted a teaching programme, a school calendar and timetable that would suit the particular needs of the rural population of the Roman countryside. Moreover, in his makeshift schools initially opened in village huts before any real school buildings were built, he provided for health care, school meals and, finally, the setting up of kindergartens all based on the Montessori method, of which he appreciated the innovative educational system and especially the social principles, the respect for the human person, the freedom of self-determination and the love for the harmony of things which sustained it.

Marcucci devoted his whole life to spreading education among the rural proletariat, not only in the Lazio region around Rome, and managed to create a high profile school service, to train a qualified teacher class, and to build modern schools from an architectural, hygienic and furnishings point of view. Above all, he managed to increase the creation of Montessori Children's Homes. He always managed to achieve extraordinary results even when the environmental conditions seemed to be working against them. Among the many testimonies there is a diary written by a young teacher, Irene Bernasconi, who, having just finished a Montessori course in Milan at the *Umanitaria* in school year 1915-16, started working with the children of farm labourers in the kindergarten of

Palidoro, one of the most desolate and malaria-ridden places of the Roman countryside north of the capital.

Raniero Regni, *Cosmic Vision and Geopedagogy in Maria Montessori*

1. Maria Montessori's educational message is contemporary not only of the present but of the future as well. Her discoveries of a century ago are confirmed by studies in educational psychology and the neurosciences. Her educational solutions are truer and more useful today, at the start of the millennium, than yesterday, at the start of the 20th century. It cannot be treated as just a classical phenomenon because her message is still alive and vital. One cannot speak of Montessori non-topicality: compared to Montessori, it is we who are not topical or it is the present educational and school culture that can no longer bear depth and rigour. Existing in time without being fashionable: great writers perform at their best when careful of their own times and yet inattentive of fashions. Unfortunately, Montessori never had any real following or sufficient esteem on the part of the Italian pedagogical culture, which always dealt with her in a hurried fashion instead of really getting to know her.

2. Turning to the theme, we can distinguish a cosmic education, a cosmic plan and a cosmic vision. Of course, one should always remember that the "Montessorian paradigm" is not a closed system of self-sufficient theories, not a pedagogy of the model, but an open system, a real "spiritual microscope". This was in Montessori's intentions, in her "method". The method is the tool for seeing the invisible, it is the way to reach the secret land of childhood. A first definition could be the one that makes cosmic education a particular form of choice and presentation of cultural contents in that particular period of development going from six to twelve years of age and which roughly coincides with primary school. It is, or should be, the way to respond to that particular sensitive period that is the one of the culture and the new needs of a child's personality. Cosmic education is a centre for education that guides it and prevents it from becoming dispersed in the notionistic particularism of the many disciplines.

The cosmic plan could, at every stage of human life, be considered the highest plane of education. Not only as regards the inclusiveness and extension of contents which coincide with everything in nature and history, but also and because in it the child or pre-adolescent finds an explicit answer to the explicit questions they ask themselves.

The cosmic vision is Montessori's own image of the world, her philosophy of life, that grew within the discovery of the child and which emerged first to then inspire her educational psychology.

3. An image of the child and of its education, an image of man and of his educability confirmed by contemporary research (Bruner, Pinker, Gardner, Eibl-Eibesfeldt). An image of the child that goes beyond nostalgia and resentment, made up of sciences and love. In the child there is an energy that is nothing but a particle of the infinite fire that is life, a particle of that energy which slumbers in the pod, in the seed, and which suddenly makes him burst and bloom. Some of that energy is preserved in the moments in which also adults are born again, feel touched and changed with respect to the infinite repetitiveness of daily life. For her, man is in the world and has a mysterious and deep harmony with it, in the same way as every living thing has a deep bond with every other reality of the cosmos. *Kosmos*, the order of the Ancient Greeks, consisted of the interrelation of everything that lives and of the interdependence of everything that exists. *The mystery exists: it is not absence, it is daily presence*. A relationship between the infinitely large and the infinitely small. The child as a fragment of the infinite, as infinite novelty, as the image of God, is the certainty that can move the mountains of pain and suffering, and can give meaning to everyone's life.

4. Cosmic vision, ecological thought (ecology of the mind) and geopedagogy (ecology of modernity). The evolutions – cosmic, biological and cultural ones – are essentially part of the same creative process. An ecology of the mind and of the environment. A higher human ecology. This ecology must not be taken as a new discipline or as a field of interdisciplinary activities, but as a

new way of thinking the world and thus also school education in terms of *connections, relations and contexts*. The acting locally and thinking globally recommended by ecologists is a way to keep the two perspectives together: the terrestrial roots of local identity and the air of the global climate. Ecological thought calls for the integration of knowledge and perspectives – moving from the part to the whole, from separate objects to relations, and from substance to configuration. Applied to school as an institution, it means acting *glocally*, that is, by paying attention to both local and global factors. From the cosmic vision one may deduce a real geopedagogy, taking the prefix “geo” to mean the earth and the world.

5. Cosmic education as a centre for education and as the ecology of modernity. A thinking of education as a backdrop of the extreme modernity we are experiencing, of a modernity that globalises. Solidarity in space and time, and geopedagogy for the era of extreme modernisation, of late modernity, of ‘surmodernity’, reflective modernity, post-modernity. A placing of education issues as a backdrop of the world.

Giovanna Providenti, *Education as a Peace Project. Maria Montessori and Jane Addams*

In this contribution I wish to draw a parallel between Maria Montessori and a writer who is not well known in Italy: Jane Addams (Chicago 1860-1935), a Nobel Peace Prize winner in 1931, known in America and in the world above all as the founder of the Social Settlement Hull House, a residential social centre where educational and cultural activities were carried out for the inhabitants of a multicultural industrial suburb of Chicago.

The parallel between the two writers focuses on their common way of considering the issue of peace, connected to the vital processes of the human being: social and, above all, educational ones. For both thinkers there is a close connection between the free and broad realisation of every individual and the construction of a better world, between means and ends, between education and a fair society, between moral and spiritual development and a real, profound, experience of freedom. Both writers were founders of alternative structures – Hull House and the Children’s Home – where the “users” could have a broader and deeper human experience, addressing a new curiosity to all levels of human life and that shows it has strong moral foundations rather than intellectual ones, as Addams wrote. And as Maria Montessori noted in her Children’s Homes: “we have seen children who completely changed, acquiring the love for things, while the sense of order, discipline and self-control develop in them as an expression of perfect freedom. We have seen them work steadily, enhancing their energies in their work”.

For both Maria Montessori and Jane Addams, peace was an essential theme of their reflection and their very lives, which in their later years they mostly devoted to their pacifist commitment.

Their idea of peace, which they arrived at by delving deeply within themselves, cannot derive from pacifist propaganda or from mere intellectualist reasons, but can only be the fruit of a series of vital and psychic processes to be built up gradually and “scientifically” through education.

Ester Patruno, *The complexity of “simple Aladdin”. Psychodynamic themes in the works of Maria Montessori*

The aim of this work is to suggest the possibility of a further interpretation of Maria Montessori’s thinking and works, with respect to the usual pedagogical one. In particular, a psychodynamic interpretation is proposed for certain aspects of her system.

To do this, we must, on the one hand, define the concept of “psychodynamic theme” and the context of variety and complexity of psychodynamic tradition, linked to Freud and psychoanalysis, but not limited to these. On the other, the great “availability” of Montessorian thinking is stressed and accounted for in terms of the capacity to adapt, develop and grow – a presupposition that makes it

particularly suitable for comparison with research spheres even not directly relevant to educational themes.

Following a historical perspective, Maria Montessori's university education and early works are taken into consideration within a scientific and cultural context not different from the one of the early Freudian experiences, with what would then be the discovery of the unconscious and of psychoanalysis, with reference to environments of dynamic psychiatry and to the experiences in psychiatric clinics. The idea is to demonstrate how this "coincidence" of contexts for the development of the two distant but parallel systems was not irrelevant.

The contribution then goes on to analyse the works that a certain tradition tends to define of psychoanalytic inspiration: *Il Segreto dell'infanzia*, *Il Bambino in famiglia*, and *La Mente del bambino*, in order to demonstrate how psychoanalysis and the new Montessorian psychology performed an identical operation of revealing the internal dimension, as well as to evaluate the importance of some differences.

The detailed analysis of the more "social" elements of the Montessori system becomes an opportunity to evaluate the importance and influences of Adler's Individual Psychology on it.

The many cues and hypotheses that emerge from this work aims to show that the "psychoanalysis" cited in Montessorian texts is not Freudian, Adlerian or relational – it is all of these put together. Our interpretative needs require differentiation, classification and criteria for distinguishing and ordering. This is a limitation that this work aims to overcome by redrawing not just an educationist and teacher Montessori but rather an "indefatigable researcher who, in several directions, explores man's knowledge, such that today it stands as an old, sturdy and rich tree still capable of bearing much useful fruit" (Augusto Scocchera).

Silvana Quattrocchi Montanaro, *The possibility of learning written language in early infancy*

This work examines the early possibility of written language acquisition and describes a direct experience. In the London course of 1946, Maria Montessori said that the letters of the alphabet should be in children's bedrooms from very early on and that she would also like to have floating letters in order to use them at children bath time.

The composition of words is the precursory act of the super-language we call "reading and writing" and must not necessarily boil down to the mere writing and reading activity itself. Indeed, for Maria Montessori, "*it is worth separating this act which can be clearly independent of its higher utilizations*".

On the suggestion of a Montessori teacher of unquestionable experience, polished letters were presented to a one-year-old child. The great interest the child showed for this material seems to confirm the "*hunger for words*" that is typical of this phase, already described by Montessori and then confirmed by Nobel prize-winner John Eccles. The child we observed also showed he could use this material almost immediately to compose words like *zio* ("uncle"), *cane* ("dog"), his own name, Raul, and others besides.

However, when he tried to compose the word *gatto* ("cat"), he found himself in insurmountable difficulty and turned to an adult saying, "*No, gato no, gatto*", showing he clearly understood the sounds making up the word and thus the letters needed to compose it (*gatto*). This impossibility was connected to the fact that the polished letters have only one example of each letter. Therefore, a system of mobile alphabet letters was introduced so that the child could continue his fascinating work of word composition which greatly interested him.

A study is being made in some child communities, in cooperation with the Montessori Studies Centre, in order to repeat this observation and to finally heed Maria Montessori's recommendation: "*Education must start at birth and the first two years are the most important for all the acquisitions of the psychic embryo*".

Cesare Fregola, *Levels of abstraction in mathematics learning through Montessori materials*

It is time for innovation and thus for contrasting developmental and conservative boosts to come to the attention of the various places in which school action is performed everyday.

Montessori materials seem to want to contribute to the representation of the complex concepts of arithmetic and geometry and certainly have allowed the identification and definition of learning models and teaching patterns that have led to defining the Montessori proposal as a method. They have played a key role in the construction of teaching processes that can determine an effective and motivating repertoire of task environments, consistent with the needs and mathematical knowledge of the times in which they were introduced and that they contributed to generate.

Certain processes, such as those of abstraction, codification, decoding, transcoding and transfer characterising mathematics learning, in particular, in the various phases of developmental age, may be found in those processes, but also revisited in the light of intentional interconnections within the current developmental state of mathematical, psychological and scientific pedagogical knowledge. The conceptual, theoretical and applicative characterisations in the field of mathematics teaching dictated by the needs to explore the invariant and variable aspects of reality and to seek order to place as a basis of a method, may start up a construction and reconstruction process of the codes of logical and mathematical language on the part of learners, within the specific semantic fields that the task environment may propose.

In this sense the materials could be reconsidered as a junction between interdisciplinary maps with specific perspectives inside the “method” but able to enrich themselves thanks to the contribution of the learning experience that “multimedia” children gain in other real and virtual places that go to develop the sense of self-effectiveness in the area of mathematics – a territory which cannot be considered, even today, as very appealing – and within reach of the child’s mind.

Mauro Laeng, *Can the Montessori method have developments in secondary education?*

Maria Montessori’s method is deservedly well-known in the child education field, where the brilliant educationist successfully extended to normal children what she had experimented with subnormal ones. The applicative method in the “Children’s Homes”, destined to welcome children from three to six years of age, was later developed for very young children in the Montessori Birth Centres and for the slightly older children in primary school. Now, we wonder whether it also has interesting aspects for lower and upper secondary schools.

Montessori indeed devised a complete course of development divided into four six-year periods, as Comenius had already done. She thus did not limit herself to childhood and wrote a book *Dall’infanzia all’adolescenza* which gives an affirmative answer to the question and provides some guidelines. But, especially her son, Mario Montessori, working in many courses on psychoarithmetic and psychogeometry, showed how the directive principles of the method are not only applicable, but are indeed very effective also for lower secondary schools.

Mathematics offers particularly useful examples. But even the grammatical and logical analysis performed by affixing labels indicating the functions of various parts of the discourse, already started up in the Montessori method for primary schooling, both for Italian and foreign languages, may be extended to lower secondary schools. The abstract essence of the symbols take on a tangible feature without renouncing their conveyance of concepts.

The education of preadolescents and adolescents is not, however, only intellectual. It is also an education for feelings, openness to social cooperation and character building. The broader range of Montessorian thought is felt in education for peace, meant as a world task. And, opening up to multiculturalism and combating every discrimination, it offers secondary education challenging perspectives. Thus, religious education, which in Spain and Italy Maria Montessori linked to

Catholic education, may be extended in an ecumenical spirit also to other religions, such as the oriental ones that she got to know in India.

Monica Salassa, *The development of Montessori schools. A comparative analysis*

Reconstructing and accounting for the Montessori movement in the world and of the spread of the Montessori method in school systems of various countries is a difficult task and is practically impossible here. However, we cannot ignore the very widespread dissemination that this educational model has had, and continues to have, in virtually all five continents: Europe, America (North, Central and South), Asia, Africa and Oceania.

The aim of this contribution is to present, through a quantitative kind of analysis, an initial up-to-date picture of the current state of things in some European countries in order to obtain, in particular, useful statistical data for a comparison with today's state of development of Montessori schools in Italy.

Starting from an overall glance of Europe, it was decided to select those European countries which, from an initial examination, had already provided for a systemisation of certain data on Montessori schools and the public availability of the data. For each country, a brief history of the Montessori movement will be given at the start.

As regards the Italian situation, instead, contacts have been made with the Ministry of Education and with regional education offices responsible for collecting as analytical and up-to-date data as possible on the state of the art in each region.

This contribution does not intend to solicit an evaluation that merely takes into account the number of Montessori schools, since Montessori's influence could appear still limited today if we only consider this aspect. Other references, of a more specifically qualitative kind, could be considered later on by taking into account statistical data and those indicators of criteria for a qualitative selection of schools.