

# COSMIC EDUCATION

by Margaret E. Stephenson

*Margaret Stephenson begins with the reasoning elementary child as he answers questions about "all things." She centers on the unity of knowledge, leading "from the whole via the parts back to the whole." Imagination is enhanced to bring abstraction to an engaging and lofty motivation, and the elementary self is referred to as the "atom of the spirit." Miss Stephenson moves from the early "sensory" exploration of the three to six prepared environment to the language of its parts, flowing through names, then communication of ideas, and finally the languages of world, invention, and human keys to understanding.*

As long ago as January 6th, 1936, in London, Dr. Montessori gave the first lecture of a short series of lectures which were an extension of the 21st International Course. These extension lectures were directed towards the psychological and educational needs of the older elementary-aged child. Dr. Montessori was later to give a lecture on the Four Planes of Education at an International Montessori Congress in Edinburgh, Scotland in 1938.

In the fifth of the 1936 London lectures on the older child, Dr. Montessori said ". . . we have continually repeated that the child has revealed to us in a clear and human way that there exists within human nature an impulse towards work and he has shown that upon the circumstances of this impulse depends normality or the opposite".

We should recall that Dr. Montessori, during her years of work with the younger child, had shown that it was activity in the prepared environment of the *Casa dei Bambini* that would allow the psychically deviated child of the First Plane to rid himself of his deviations and attain normalization. In 1936, we hear the same but now applied to the older child.

Dr. Montessori's work with the younger child appeared to many to be revolutionary; the children in the Montessori schools had achieved results thought well beyond the capabilities of such young children. Now Dr. Montessori, in this London lecture went on to say that, in traditional education, the whole system was based on two faculties: memory and abstraction. But, she continued, the mind of the child which has already received some culture

and absorbed certain elements of knowledge in the Children's House, tends to search out for the interrelation between things at this next age. The child is now able to grasp the interrelations by use of his reason. Dr. Montessori explained: "Reasoning brings things in their relations to one another; compares them; deduces from them; arrives at conclusions and, when the conclusions have been arrived at, there is a state of psychic satisfaction and, with this, a sense of calm and repose". This then is the normality of the elementary-aged child.

Dr. Montessori had more to say on this point of reason which is of such paramount importance to our children and thus to humanity. In a lecture given at the University of Amsterdam in 1950, she illustrated further this idea of the reasoning mind of the elementary child.

In this intellectual period, the child's questions are innumerable. He wants to know everything. His thirst for knowledge is so insatiable that, generally, people are at their wits' end about it; therefore, they most choose the easiest way and simply force the child to be silent, and to learn only what we grown-ups consider useful for him. But, in doing so, we also destroy his spontaneous interest. Learning then becomes a tedious and tiresome business. The result is all sorts of deviations in the child's personality.

It should be realized that genuine interest cannot be forced. Therefore, all methods of education, based on centres of interest which have been chosen by adults, are wrong. Moreover, these centres of interest are superfluous, for the child is interested in everything. . . . A global vision of cosmic events fascinates the child and his interest will soon remain fixed on one particular part, as a starting point for more intensive studies.

As all parts are related, they will all be scrutinized sooner or later. Thus the way leads from the whole via the parts back to the whole.

Thus the child will develop a kind of philosophy which teaches him the unity of the universe. This is the very thing to organize his intelligence and to give him a better insight with his own place and task in the world, at the same time presenting a chance for the development of his creative energy.

In 1969, at a study conference in Bergamo, Italy, Mr. Mario Montessori added this explanation:

The cosmic education, or Montessori approach to the education of the child from 6-12, came to be in the same way as the previous approach had come, by following the psychic needs of the child. He is now insatiable of knowledge, he has a hungry mind. If he is impeded in his research, we create unrest and rebellion.

The older child does not use his senses, but his imagination. Let us give aids to the imagination. The school must prepare the child to go out into the world. If everyone has a task on earth, what is the place of man in it? So we arrive at the history of mankind which, to be understood, must be inserted in the history of the life of the Earth and the Universe.

I am going to be quoting extensively from Dr. Maria Montessori and, as an explanation for this, I want to share with you some words of Mrs. Ada Montessori, the wife of Maria's son, Mario. In her last letter to Mr. Bob Portielje, the chairman of the Association Montessori Internationale, Ada Montessori wrote: "I think that people do not really understand what the AMI, in the sixty years of its existence, has been standing for. They think we are asking for loyalty to the Association—that is not the case. It is loyalty to the Montessori Method, without adding other material, other methods. Why not 'the Maria Montessori approach'?"

So, what is the Maria Montessori approach, which began in January 1907, which continued until her death in 1952, which was carried on by Mario Montessori, her son, unchanged until his death in 1982, which still continued through Ada Montessori until her death in 1988, and which still continues through the Association Montessori Internationale, for whom you have organized this Congress? If we want to know what Maria Montessori meant by Cosmic Education, we must listen to Maria Montessori. This is why I want Dr. Montessori to speak for

herself on this subject of such importance, Cosmic Education, and therefore not to have it merely interpreted by me.

There are very few books in existence written by Dr. Maria Montessori. The title of one of them is as significant as the book, it is *To Educate the Human Potential*. If we really reflect upon that title, if we take it in with all the force of our mind and our spirit, we might well be overwhelmed by the magnitude of the vision that Dr. Montessori revealed to us for humanity. She spoke of "the secret of childhood" and Mario Montessori, her son, referred to "the atom of the spirit". What is that "secret of childhood", that "atom of the spirit" but the "human potential".

In her book, *Education and Peace*, Dr. Montessori reminds us that "The child is both a hope and a promise for mankind. . . . What is needed is faith in the grandeur and superiority of man". And in another book, *The Child in the Church* she tells us that her aim is "to influence the whole life of the child . . . a total development of the personality, a harmonious growth of all the potentialities of the child, physical and mental, according to the laws of its being". And in *Education and Peace*, she remarks astringently, "Education today does not take personality into account and does not develop it...man today pays no heed to human personality and regards human society as a colony without individuals". This was said in 1935. Have we moved far since then, I would ask?

In 1944, in India, Dr. Montessori spoke of Cosmic Education which she had first mentioned in London in 1936. As always, she directed the attention of her audience to the child, giving this time an even greater emphasis to what she thought of as his task and his significance to the future history of humanity. The following passage is from her lecture on that occasion:

With others, we believe that in the cosmos there is harmony; that everything that is in it, both the animate and the inanimate, have collaborated in the creation of our globe, correlating in doing this their single tasks. But we think that among the innumerable agents which participated in this creation, man has had, and has, a very important task. Also that creation is not finished and that the one agent which as yet has not been taken into consideration has been the child . . . The whole world must become one nation. But for that we are not yet ready. It will come in the



next generations. It is the question of making use of the last cosmic agent, the child. If we take the child from infancy and allow him to develop his psychological powers and the potentialities within him, place him in relationship with other men and make him realize what mankind has accomplished, then this will form the first step in the formation of the superman toward which humanity tends. . . . To the young child we give guides to the world and the possibility to explore it through his own free activity; to the older child we must give, not the world, but the cosmos and a clear vision of how the cosmic energies act in the creation and maintenance of our globe. This must be accompanied by a clear vision of how—through work—the naked and feeble man he was on his appearance on the earth became the superman who has built our present civilization.

This is the significance of Cosmic Education—work, relationships with the environment and with humanity, not just for the First and Second Planes of Development for the child in the *Casa dei Bambini* and in the Montessori elementary school, but for

the total life of all humanity and for its salvation. The question before us is how do we prepare the child for a cosmic task—not how to teach him to read and write, to learn mathematical formulae, to study geography, history, biology, so that facts can be memorized and then tested, not how to prepare him to gather letters after his name and not even how, perhaps, eventually to see his name in lights.

Dr. Montessori reminds us of what we are to be about in education “not in the service of any political or social creed should the teacher work, but in the service of the complete human being, able to exercise in freedom a self-disciplined will and judgement, unperverted by prejudice and undistorted by fear”. That is what cosmic understanding is about.

Dr. Montessori tells us that this should make it possible for the child to catch a glimpse from time to time of “the cosmic vision of man on earth”. In *Education and Peace* she says:



Studying the internal parts of the five classes of vertebrates, Marin Montessori School, Corte Madera, California



Education cannot be dismissed as an insignificant factor in people's lives, as a means of furnishing a few rudiments of culture to young people. It must be viewed, first of all, from the perspective of the development of human values in the individual, in particular his moral values, and second, from the point of view of organizing the individuals possessed of these enhanced values into a society consciously aware of its destiny. A new form of morality must accompany this new form of civilization. Order and discipline must be aimed at the attainment of human harmony and any act that hinders the establishment of a genuine community of all mankind must be regarded as immoral and a threat to the life of society.

An extremely important social task lies before us; actuating man's value, allowing him to attain the maximum development of his energies, truly preparing him to bring about a different form of human society on a higher plane. . . . We must seek out, we must cultivate, we must enhance the value of man's energies, his intelligence, his creative spirit, his moral powers, so that noth-

ing is lost. Man's moral energies, in particular, must be turned to account. For he is not only a producer—he is also called upon to assume and fulfill a mission in the universe ... Morality must be regarded as the science of organizing a society of men whose highest value is their self-hood and not the efficiency of their machines.

This affords the key to the significance of beginning to understand, or of trying to deepen our present understanding of the idea of Cosmic Education and of its importance to the education of our children. In 1951, in London, at the last International Montessori Congress at which she was present (she died in 1952), Dr. Montessori was praised by ambassadors and other important figures from many nations for her contribution to education. In reply, after thanking them for their kind words, she also scolded them for appearing still to be looking to her and applauding her instead of turning their attention and their efforts to the child in whose direction she had continually pointed them.



Studying the climatic zones using chart insets, Japan

Here once again, in her book *To Educate the Human Potential*, is a clear directive from Dr. Montessori:

If human unity, which is a fact in nature, is going to last to be organized, it will be done only by an education that will give appreciation of all that has been done by human co-operation and readiness to shed prejudice in the interest of common work for the cosmic plan, which may also be called the Will of God, actively expressed in the whole of His Creation. . . .

(This education) requires the influence of sacred and deep things to move the spirit and the new children of civilized humanity must be given a profound emotion and enthusiasm for the holy cause of humanity.

Dr. Montessori considered that the child exposed to these ideas will eventually be led to ask: "What am I?" "What is the task of man in this wonderful universe?" "Do we merely live here for ourselves or is there something more for us to do?"

We have within our grasp the formula that would allow the child to act as the cosmic agent for the world and its humanity. That formula is our human, universal property but is also unique to each individual. Instead of the study of subject matter and curriculum, Dr. Montessori, from 1907 onwards, demonstrated through the children in her schools that it was the factors of human nature which aided the development of the child. She continued to draw our attention to the psychological characteristics of each successive Plane of Development, to the human tendencies which belonged to the nature of the human being from its first inception on earth and to the need of "liberty in a prepared environment", to allow for any created species to proceed to the attainment of its own proper potential. These, though loosely called Montessori principles, are principles of reason which ought to be accepted and applied to any form of education because they are universal principles and, therefore, truth. Traditionally, education has looked at itself as a subject and, therefore, has considered what has to be taught and learned. Instead, Dr. Montessori, from the beginning of her work, pointed us to the child and asked us to consider him.

In order to make use of this cosmic agent, the child, to help bring about that unity which humanity longs for, there has to be a recognition that the child is the common denominator that already unites us. It is the child that all men share, as we have all been the child. To our parents, when we came, came

a human being with the same unchanging nature that has been the nature of man since his first arrival on the earth.

The world, the universe, into which we came is the same world, the same universe in its essential nature as when it first came into being.

Human society, man, woman, and the child that was me, that was you, is still with us—coming down through the ages of history, from the very, very first unit of society formed when the first child was born to the first man and woman.

Dr. Montessori, when she recognized the child and spoke of "the secret of childhood" and Mario Montessori when he affirmed the significance of that "atom of the spirit" that is the power of the child, entered into that ageless procession of life and its importance which is humanity and its child.

It is into this continuing drama of the life of man upon earth that we enter too if we join forces with Montessori and engage with her in the work of making the world aware of the task of the child as the cosmic agent for mankind and its future.

What did Dr. Montessori consider the role of the adult to be in this service of the child? How can we ensure that the child is free to operate as the cosmic agent? We have to keep in mind that our service to the child is to enable him to serve in his turn. It is that theme of service that runs throughout Cosmic Education and that we unfold to the child in the elementary class.

We have already mentioned the realization by Dr. Montessori that the adult world would have to take into account the universal human tendencies, the psychological characteristics of the Planes of Development, and the need to recognize the importance of freedom, but given within an environment prepared for development.

The universal human tendencies—to explore, to orientate, to order, to communicate, to work, to repeat until relative perfection is reached, to create what is not there, are operative throughout life but take on a different direction at each Plane of Development. The psychological characteristics of the child at the Second Plane of Development are different from those of the child at the First Plane. Then they were operative in order to effect the construction of



the individual human person. At the Second Plane, they are to make possible the construction of the individual as a member of society. And liberty in a prepared environment, which allows the individual to make use of the human tendencies to conquer the environment and to make an abstraction of it, asks for greater and greater responsibility towards that environment and more and fuller understanding of the significance of human freedom within it as the individual proceeds through the Four Planes of Development.

With Dr. Montessori's words to us as a background and recognizing that we have to take the human tendencies and the specific characteristics of the child at the Second Plane of Development into consideration as well as putting the child in touch with a prepared environment and giving him liberty within it, how is the adult to present Cosmic Education?

To the child in the First Plane, the small child in the *Casa dei Bambini*, Dr. Montessori had said we must give the world. That, to many, appears to be nonsense. How could this be possible? But the world is the qualities of its components and the facts of the lives of the people who live upon it. Dr. Montessori has incarnated those qualities and those facts in the prepared environment of the *Casa dei Bambini* and its materials.

The world is color, size, dimension, shape, form, sound, touch, taste, smell. The child comes into contact with all those qualities when he is born and explores them unconsciously in the years from birth to three and takes in impressions of them through the enormous and significant power, the unconscious absorbent mind. But the mind of man functions on order and, for those impressions to be usable, they have to be classified and organized. Here is the work for the conscious absorbent mind.

The sensorial material of the *Casa dei Bambini* gives the possibility for this classification to be made. It is as if the world's qualities had been reduced so that they could fit into the *Casa dei Bambini*. There are only three primary colors in the world and there they are in the first color box, ready for the child to manipulate. There are only three secondary colors and there they are in the second color box. But there is a huge array of shades of these primary and secondary colors and so, in the third colour box, the child is introduced to a sampling of just a few of these. It is this limitation in the material that allows

the child unlimited exploration of the environment of the world in which he finds other shades which were not present in the color boxes.

The games with the sensorial material ask the child to match the color of the tablet to something in the environment of the classroom. The sensorial material has thus become a "key to the environment". There is one other match to be made. The child is given the language for the quality after he has gathered experience of it. Now he can carry around in his mind the word blue which matches the color tablet and which also matches the color of the sky on a sunny day, and some flowers, and some dresses, and some birds, and this allows the child an immense field of exploration of his environment which is the world; and thus it is for the whole of the sensorial materials.

But the world is also land and water, fishes and birds, plants, trees and flowers, insects and animals. This time, with pictures and names, limited as is the sensorial material, the child can explore the geographical terrain and the biological furnishings of the world that was prepared for his coming.

But men and women and children have lived and still live in this world and the child has need to explore this aspect of the world also. Once again, through limited pictures and names, the child is put in touch with a sampling of the lives of people in his world. We show him houses, clothes, transport, musical instruments, song, art and sculpture, jewelery and design, inventions and science. This is not history, geography or biology, not geometry, zoology or science but the making of the life of the world and the facts of it and its inhabitants accessible to sensorial exploration by the young child through the materials in the *Casa dei Bambini* and the giving of the names for what is found so that the child may make a vehicle for the transmission of the knowledge of his findings.

But the child has also to explore the language of his world. In the *Casa dei Bambini*, the child must be helped to make the discovery that the language he created earlier, his mother-tongue, can not only be spoken but can also be written and read.

But there is also another language in the world besides that for communication of ideas. There is, too, a language of invention. This language is materialized in the mathematics material of the *Casa*

*dei Bambini*. This material gives the small child, who is still a factual explorer, the possibility of the sensorial exploration of quantity, shape, form, dimension—the symbols for these and the language. It allows the child, just as with his mother-tongue, to explore the behavior of the particles and it gives a formula for this behavior.

Because, through the prepared environment of the *Casa dei Bambini*, Dr. Montessori had been able to give the world to the small child, she was able to say: “What is left for the older child but the universe, the cosmos?” “Let us give him a vision of the universe, an imposing reality and an answer to all questions.”

The human tendencies turn now towards this imposing reality. The absorbent mind of the child of the First Plane has become the reasoning mind of the elementary child; the imagination is now able to operate with an ability to distinguish between fact and fantasy; the child’s intellect is now capable of an immensity of work; he is interested in morality and justice, is compassionate and hero-worshipping. And so the vision of the cosmos can be opened out to him at this Second Plane of Development. The plan of Cosmic Education lays upon the adult a different task than that of the traditional teacher preparing to impart areas of a curriculum. Dr. Montessori has said to us in this regard:

The secret of good teaching is to regard the child’s intelligence as a fertile field in which seeds may be sown to grow under the heat of flaming imagination. Our aim, therefore, is not merely to make the child understand and still less to free him to memorize, but so to touch his imagination and to enthuse him to his inmost core.

The child in the First Plane had been given the world for his senses to explore. At the Second Plane, the elementary child needs to explore, not with his senses, not with the power of the absorbent mind, but with his imagination and his reason and now move out towards the universe in which the world resides.

The universe was the first prepared environment for man and, with the coming into being of the universe, we find directives within the elements of which it was composed and laws being obeyed, though unconsciously, to bring order out of chaos. And so was brought about the fashioning of land and water, the purifying of air, the production of oxygen.



Courtesy of Lynn Jessen, Forest Bluff School, Lake Bluff, Illinois

Then, still guided by directives and law, came the clothing of the land with plants and trees and flowers and grass, the furnishing of the land and water with living creatures, the animals, birds, insects, fishes. All the chemical elements, the plants and the animals, obeyed through their nature and the directives within it. That is marvel and wonder indeed and we still have around us the prepared environment, still the same directives, still the law and order, still the pattern within each of the composing elements.

But that prepared environment was to see a still greater marvel as man appeared with his own directives, his own laws for his human nature. Man came to that prepared environment that is our earth, within the universe, and has conquered that environment through the gifts unique to him amongst all other living creatures on earth, the gifts of intellect and will and the special characteristics of his human nature. The child comes with the same gifts, intellect and will and fundamental psychological human characteristics.

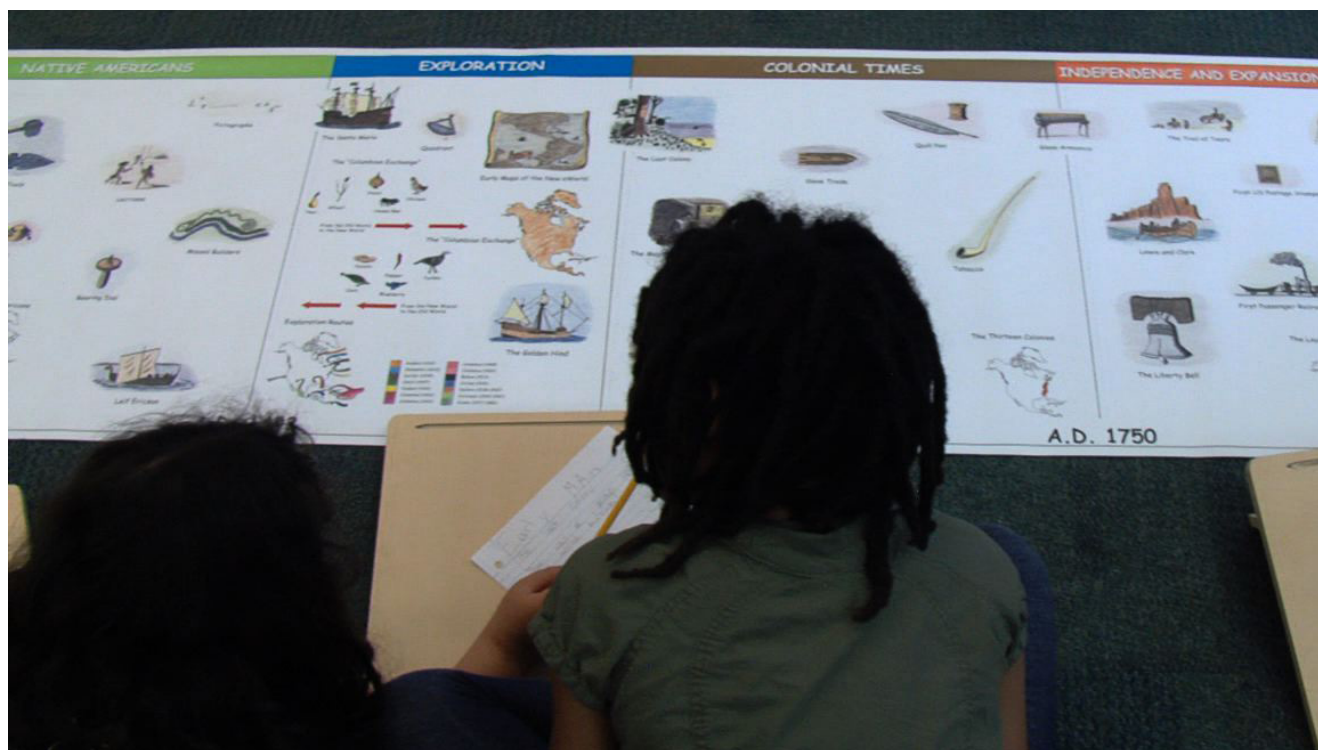
With his gifts from his prepared environment man, from his very first beginnings on earth, built up an economy to cater for the satisfaction of his physical needs. As time went on and societies of men developed to share the tasks of life with one another, that material economy proved not enough for the nature of man in its totality. The aspect of the human being that is not purely physical also needed a territory for its expression. And so a science of life was developed by human beings with the growth first of a material territory to cater for physical needs and then a spiritual territory of art, culture, and religion to cater for the spiritual needs of man.

These two territories became the properties of the societies and later the nations of man, as time went on and the story of man was written through the ages. When the very first child was born on Earth, he entered into the heritage of the prepared environment of the universe and into the material and spiritual territories of his parents. This heritage has continued to be handed on to each child as he is born and it is this heritage that awaits his exploration. Just as the first human being on Earth, each child is born with the same human tendencies, the characteristics of his human nature, to use in his exploration. And just as the first human being

was the change-agent of his environment, molding it to his needs and building a way of life from it to satisfy those needs more perfectly, so the child, if given freedom and a sense of responsibility, could become the change-agent of society and the cosmic agent for the unity of mankind.

At the Sixth International Montessori Congress held in Copenhagen, Denmark, in 1937, Dr. Montessori proposed a solution to the problems which could face humanity and which we seem no nearer solving. We only talk about them—violence, crime, illiteracy, irresponsibility, selfishness, depravity—the list could go on! What if we really listened to Dr. Montessori’s ideas of what education should be and what if we really attempted to put those ideas into practice? The following is an extract from that Congress:

Education must concern itself with the development of individuality and allow the individual child to remain independent not only in the earliest years of childhood but through all stages of his development. Two things are necessary; the development of individuality and the participation of the individual in a truly social life. This development and this participation in social activities will take different forms in the various periods of childhood. But one principle



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will remain unchanged during all the stages: the child must be furnished at all times with the means necessary for him to act and gain experience. His life as a social being will then develop throughout his formative years, becoming more and more complex as he grows older.

The significance of Cosmic Education is its significance to the development of the individual to responsible action, to responsible relationships, to responsible thought. The child should begin the development of the idea of responsibility within the home environment. The family is a society, the first unit of society. This society, though small, has its laws which are there for the safeguarding of the good and the rights of the members who make up this first small unit of society. The child in his home environment of furnishings, objects, activities of family life and the first unit of society, should have been made ready to take his place in a somewhat larger though still a closed and secure environment, that of the *Casa dei Bambini*. This again is an environment of furnishings and objects, activities for himself and his companions; another somewhat larger unit of society. This environment allows the child to work independently, to explore the world through the materials of the *Casa dei Bambini*, to begin to take responsibility for his environment through the Exercises of Practical Life and to relate to more companions than his own family through the Exercises of Grace and Courtesy extended to those companions in his class. The foundations of Cosmic Education are there, in the law and order that govern this small society and in the “keys to the world” that are presented to each small child.

Within the home and within the *Casa dei Bambini* are the opportunities for the development of individuality and the participation of the individual in a truly social life which Dr. Montessori has said are essential if we are to have a different world.

The child in the Second Plane of Development also needs “liberty in a prepared environment” but the psychological characteristics are different; the human tendencies take a different direction so the environment, the activities, and the role of the prepared adult have to change. What does not change is the factor that allows the child to continue his progress towards the realization of his responsibility for his environment, for his conduct and activities for himself and for society. That factor is once again the development of individuality and the participation of the individual in a truly social life. But

the opportunities for these have been enlarged at the Second Plane of Development. The individual is now faced with the universe for his exploration and with a wider society than his family and school companions for his social participation.

Through Cosmic Education, which the Second Plane child is enabled to grasp because the Absorbent Mind of the First Plane has become the reasoning mind of the Second, the child is now able to explore and to understand what Dr. Montessori calls “a global vision of cosmic events”.

Through this vision, she believed that “the child will develop a kind of philosophy which teaches him the unity of the universe”.

For the child to become the cosmic agent for the change in humanity that seems so needed, the formula for the construction of man cannot be tampered with. Whenever and wherever an activity or an end rests upon a formula, the result is only achieved if the formula is adhered to.

The universe came into being following laws for its creation; plant and animal life furnished the land and water following directives for their *lives*. Is it not reasonable to think that man also was *given* a formula for his construction, a plan for his completion of himself, an order for his happiness?

The vision of Cosmic Education draws us into the continuing drama of the life of man upon earth, his task to be the cosmic agent for mankind and its future. From the onset of his life on earth, from his first appearance in the world prepared for his coming, the history of man has been the formation of societies, the foundation of an economic science, to be carried out in whatever region of the world he happened to inhabit. That economic science, which came about in the first instance to ensure the survival of the human being, added to itself as time went on through the discovery of ways of bettering human life, of decorating it, of giving it beauty and truth, of realizing its wonder and magic. It is this pageant of glory that we *have* to allow the children to partake of and to offer them opportunities of adding to it through their own *lives* of service and love.

Dr. Montessori speaks of society as “an organization in relation to the *collective* order”. Cosmic Education at the Second Plane, and the preparation for it at the First, are the means by which the child can be helped to recognize his social

responsibility. What is the collective order but a realization of the laws which govern the continuing existence of the universe, the world within it, the prepared environment of land and water, air and sky, sun and stars, plants and animals, in all their number and *variety*, and the discipline and order—which when closely united and accepted result in freedom for man.

Cosmic Education means that form of relating the child to the universe and to humanity that will enable him to understand the law and the order underlying their existence and to realize in himself all the developmental potential that is his own particular birthright and to accept his personal responsibility.

At the Second Plane, the school must prepare the child to go out into society and into the world. To be secure and to find his own place in the world and society, the child needs to know where he comes into the picture.

Before man came, the universe came, the earth came, life came, and lastly there came man. When man came, the environment had been prepared for him; furnished and decorated, star-hung and jewelled, embellished with every imaginable form of life and color, of scent and shape, of glory and wonder. It was as if a stage-set was waiting for the appearance of the last great actor to set foot upon it. The drama had begun with the creation of the universe, had been played out for many aeons before life first appeared. The drama had continued through all the manifold manifestations of forms of life, both plant and animal. Man, when he came at last, had his own most special part to play.

All that was there before him had its continuing existence bound up with the type of life it led. The continuance of its life depended on its following a certain cycle of progression, of keeping a certain set of rules and orders. It seems as if only man was given the possibility of making his own way, of falling and rising by his own efforts, because he had been especially gifted.

The environment was there for him as it had been for the other forms of life. Their instincts had forced them to know what to take from it in order to ensure survival. But man had been endowed with two most special gifts, his own uniquely. These were intellect and will. With these, and from the environment specially prepared for him, he had to

construct his own pattern of life. He had to experiment with food, invent and make his own clothes, imagine and construct his own shelter. And he had a special instrument to use, his hand, with its opposable thumb and forefinger.

And when the physical means for his continuing existence had been discovered, then man was not satisfied. He could not remain quiescent, accepting comfortably the life he had made, but he extended it in all directions, ever seeking more and better conditions for that life.

So the child must be given the chance to find out how the universe was prepared for him and what exactly is his place in it. This gives to the child's intellect a logical unity. His research develops as he explores all the paths that lead from this center of unity. All the separate subjects of study are interlinked because they are all branches of culture.

The coming into existence of the universe, the place of earth, the laws governing substances, the necessary means of preparing the earth for man, the function of man, his conquests through the ages and the need for the unity of humanity are the factors of Cosmic Education.

The cosmic task of all the elements of the universe is the service to be rendered by each to the environment. The human being is the change-agent with regard to the environment. He has the urge not only to adapt but to change the environment according to his needs and imagination. Through the ages, the human being has continued to change his environment and to make innovations. Unfortunately, we can see in the society of today the possibility of man's destruction of his environment. This is where the child needs guidance.

In Adyar, India, in 1947, Dr. Montessori spoke of the sensitivity for life in the child in the Second Plane of Development. She said:

When we educate the children, we must appeal to this sensitivity which forms part of the nature of man. This sensitivity towards nature must be given as something which is useful not as an abstract thing but as a real sentiment. We must cultivate this sense of gratitude and, if developed, it can form a basis—this admiration for nature—this sense of mystery must accompany the study of nature. When having learned of those wonders, the child goes out and sees nature at work. This is a constant exercise and if carried out in calm and tranquility,



which touches and educates that sentiment, they see it as a reality that happens every day as in the past or future. It is evident that if this sensitivity disappears and is not allowed to develop, the life of man becomes a harsh life. . . . This sensitivity must not be developed for nature and the stars and flowers only but especially for mankind. . . . The importance of education is to use this sensitivity for nature and develop it in the soul of the child at this age, in order to save society.

We have said that Dr. Montessori told us to give the world to the small child and we have discussed how she made that possible with the sensorial materials of the *Casa dei Bambini*. At the Second Plane of Development she realized that something else was necessary and she told us to give the universe to the elementary child. How did she envisage making this possible? How can we put the universe within the child's grasp, as we had earlier put the world? Cosmic Education was the way in which Dr. Montessori exposed the older child to an imaginative and reasoning exploration of the universe and because it was to be imaginative exploration, it had to be a dramatic one. For this, Mario Montessori has said, Dr. Montessori became "a story teller of the truth".

Through what are known as the Five Great Lessons, she opened doors on to the drama of the uni-



"The eye that sees and the hand that obeys," South Africa

verse. First of all, its coming into being. Secondly, its furnishing with plants and animals. And for what? The Third Great Lesson, the coming on Earth of human beings who were given two special gifts unique to them: intellect, the power to reason, to think, to know, and to understand; and love, the power to will, to choose the good of others, and thus to serve. These same qualities we have to bring to the child's awareness, to awaken his desire to use them.

So it is the immensity of this act of creation that we open up to the elementary children with Cosmic Education. We put before them the pattern of law and order, the reasonableness of rules. At this very earliest stage of the child's time in the elementary class we show him the importance of rules and of keeping them so that the pattern of creation is not disturbed. Rules become understood then as safeguards and not as restrictions to freedom.

And so we have the first three Great Lessons to set this pattern of rule and order.

Firstly, The Story of God Without Hands, the creation of the universe, showing the action of the chemical elements, the substances of matter, liquid, air. Then, secondly, The Coming of Life, the furnishing of the world with plants and animals, a way of life given differently to each and each only able to continue its existence as it followed that way of life. And thirdly, The Coming of Man, the last great actor on the stage of the created world whose environment had been so beautifully prepared for his coming; who had a special part to play and without whom the universe could only have been an unfulfilled promise; the uniqueness of this human being that is you and me and each child.

Then with The Coming of Man we move on to the other two Great Lessons which proceed from the two gifts to the human being, intellect and love. These Great Lessons draw the attention of the child to the two great achievements of man—the language of communication and the language of invention—The Story of Communication in Signs and The Story of Numbers.

Dr. Montessori asked us to foster in the child (a) a sense of gratitude to God, the Creator, and this we do with the first three Great Lessons and (b) a sense of gratitude to man and this we do with the other two Great Lessons.





Researching the Timeline of Humans, Japan

History, as the story of man and his achievements, is at the center of Cosmic Education because of the nature of the being whose story it is. The understanding of our place in the universe depends on the understanding of the law and order which governed the elements of the created universe and our world as part of it, the plants and animals that play their part in conserving that order and then, above all, the recognition of the gifts with which man is endowed, intellect and love, and of the understanding and realization of the reason why those gifts were given—had to be given—if the universe were to be complete.

It is this great drama of human beings, not isolated from the rest of the created universe but part of it and therefore with an important and significant role to play in it, that we need to emphasize for the children at the Second Plane of Development. The universe and its elements and the plants and the animals are not just things and means. They are

lovely in themselves. Through the Great Stories of The Coming of Life and The Coming of Man we can help the children realize that all created things are one with us and so they are to be treated with love, that gift to human beings which translates into “the being able to choose the good of others”. But we also have to help the children capture an even greater vision. In the words of Gerald Vann, to be able to see “the inward beauty and holiness in the poor things and ugly and the things of mean repute, in the waifs and strays of the world, in the dull and colourless moments as well as in the moments of great joy”. He continues:

We lose the power to love and enjoy things as we should when we lose the power of vision; and we lose the power of vision when we lose the life of the child. When the visionary gleam fades into the light of common day we go on using things because we understand their utility but more and more we forget that they are things in themselves, things of beauty; we forget to stop and look.



Through the eyes of the children to whom we unfold Cosmic Education, we adults can have our own eyes opened again to see the grandeur and the majesty, the pageantry and the glory, of this Cosmic Plan in which we are all called to participate. We can begin to realize the interconnectedness of all elements, the interrelatedness of stars and planets, of matter and liquid and air, of plants and animals, of spiders and butterflies, of men and women and children. It is through these Great Stories of the Truth, which relate the Cosmic Plan, that we introduce the children to the idea of respect of all of us for one another.

This message has to go out to all the children in our schools and to all the world—to the poor who are often not respected, not loved; to the rich who are also poor because they have been given so much but which, so often, has not included love and care; to the middle class who, perhaps, are the least recognized because they are middle, like the middle child in the family.

Unless we can get this message across to the children in the elementary classes of Montessori schools it will not matter and will make no difference and whatever other messages we give them will have no value. To stretch their intellects, to make them classicists, to form budding scientists and mathematicians, to give them academic excellence, will have no worth unless they are also integrated, committed, respecting, loving and caring individuals. This is the theme of Cosmic Education.

What we call subjects of the traditional curriculum enter into this theme because they are to do with the totality of the Cosmos, not because they are the subjects that the teacher should teach and the children should learn. The curriculum is to be the universe, its furnishings, its inhabitants, their stories; not lessons in books to be listened to in sequence, memorized, tested and graded. The question underlying Cosmic Education is how to present it to the children and how to introduce them to work with it.

What is geography but the story of the earth and its coming into being through the following of the laws given to the substances of which it is formed?

What is biology but the story of the coming of life on Earth, to preserve the harmony of the world

and to furnish it with beauty and color and scent and form and variety of life?

What is history but the story of the human beings who came to fulfill the cosmic plan, set in motion at the time of creation and without whom that plan could never be completed?

What is language but one of the stories human beings have written themselves, the achievement of the discovery of the power residing in the mind of man, to have ideas and to communicate them to others?

What is mathematics but that other language created by man to have a way through formulae—some arithmetical, some geometrical, some algebraic—to transmit his inventions?

What is science but an invention of man to perfect his material territory, the economy he developed as a way to satisfy his material needs?

What is music but another language to set beside the language of letters and which has led to song and symphony, to opera, concerto, to blues and jazz and rock, to folk-song and dance?

What is art but still another language, a creation in paint and color, in sculpture, in gold and silver and precious stones of ideas of the mind of man, an expression of his spirit?

And religion “not”, as Dr. Montessori said, “a lesson to be learnt, but a life to be lived”.

To understand the cosmic plan and how we introduce the elementary child to Cosmic Education is to understand what Dr. Montessori meant when she said of her work that it was not to be thought of as a method of education but as an “aid to life”. The adult at the elementary level has a grave responsibility not to teach academic subjects but to prepare the child for recognition of his responsibility as a human being towards the environment and human society. We can only do that if we understand the responsibility ourselves; if we appreciate the great drama that is the cosmic plan; if we can enthuse and intrigue the children and excite them about this dramatic act that is creation in all its manifestations.

Cosmic Education is a vision and, like all visions, difficult to implement if tied down in rigid bands. It has its boundaries of law and order; it has its responsibilities; it has its patterns; its sequences. It is like a fugue with its ever-recurring motif. It is a partaking in the vision of the Creator who set in motion the elements of the prepared environment which was destined to be the environment of humanity. The motif is that of service—the service of the corals cleaning the seas of poisons: of the lichens and the mosses preparing the soil for grander plants; of the plants making the air safe for human beings to breathe; and each being able to continue its own existence because it was offering this service. For human beings in our present society of “me first”, of “fulfilling myself”, of the “haves and the have-nots”, of the loss of the sense of the dignity of work and of service, only a vision alive and beyond the individual’s rights will be able to bring about the idea of service of one another being the only way to true happiness and peace. The children at the Second Plane of Development are characterized by

their interest in morality, in justice, in heroes and heroines; they are compassionate and loving. These children are ready to take part in a life of service, to explore the drama of the universe and human beings as part of it if we open the doors to the Cosmos and invite them to enter in.

I would like to end with words from Dr. Montessori, spoken in Rome in 1946.

Cosmic clarity is universal. It requires the life-long dedication of each to all mankind . . . It lifts up the hearts of all men and helps civilization rise to a higher level as it ensures the existence of all. The depths of this goodness and dedication are thus boundless . . . If we educate children to see this they will be ready themselves to feel gratitude toward all mankind. This is an effective aspect of our cosmic education . . . The aim of such an education indicates the desire to contribute to the good of all, to share in this cosmic goodness and to offer God the obedient service that unites us with Him in this work of creation.

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