

MAN AND SUPERNATURE

LECTURE 12, SEPTEMBER 27, 1946

by Maria Montessori

“Man and SuperNature” is a lyrical chapter in the 1946 London course following the emergence of Cosmic Education in Kodaikanal, India. Montessori contrasts the adaptation required of animals for their survival to conscious human adaptation. Animals exist and adapt to nature, but man can alter nature and change the environment. Montessori’s article simplifies a deep distinction: Everything humans achieve in Supernature is either a better adaptation or is tragically adversarial. Montessori saw the positive possibilities of this process and described the progress of civilization as a process by which “Man takes all that exists in nature and puts it on a higher plane, that of Supernature.”

People who are not adapted to their environment are not superior people. Let me explain. Adaptation to the environment is something positive, a starting point from which a person can go a long way. Adaptation to the environment is the first necessity. If people are not adapted to the environment then they are outside the environment. They are extra-social-deficient-people. Delinquents are hostile or opposed to their environment, not superior to it. Normal people are those who are adapted to the environment.

If we are to walk, we must have ground to walk on; after we have learnt to walk, we may learn to jump, dance, etc., but we will still need the ground. Walking is a relation between the individual and the environment. Adaptation must come first. Only after this first adaptation has been made can there be the possibility of flexibility and a variety of creative responses.

We must accept adaptation as the basis upon which we can build a concept of education. It makes it possible to lay it on a scientific basis. In order to study the question of adaptation, it is necessary to study the environment. Usually we do not study the environment at

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all, so we have not got a precise idea, a scientific plan, for the basis of education, only something vague and indefinite.

Therefore, we must begin with something precise, something that can be observed. Most pedagogical theories are based on vague philosophical plans. I would suggest that instead we start from something concrete, which can really be studied and observed. Adaptation to the environment is basic to all living things.

All animals, insects, plants, all living things, are adapted to the environment. The essential reality of every living creature is that it must be adapted in order to survive and our schools should pay some attention to this fact. Each animal has a hereditary work which does not change; every animal does some work in the environment which is useful to the environment. The old idea was that we lived in the environment and absorbed as much as possible for ourselves from the environment, but our ideas are very different today. Now we realize that each animal has a particular behaviour, not only for its own welfare and happiness, but also because it is a worker in the environment. Each animal is an agent who works for the harmonious correlation of all things in the environment. For this reason every animal must do its own work. Different species do not have the same purpose. One is a killer; it must eat this or that kind of animal and cannot become a vegetarian. Each animal's life and happiness depends on it living the kind of life for which it was made. Another may eat the dead bodies of animals and it must do only this; this is its life and happiness. To an animal happiness is to follow its own destiny, its own heredity.

Each animal is an agent who works for the harmonious correlation of all things in the environment. For this reason every animal must do its own work.

If every creature tried to live in the best conditions possible (supposing they know which were the best conditions), if everyone were to look for a land with trees, water and a temperate climate ... it would be overcrowded. But the various creatures do not try to get the best conditions. Instead they seek those conditions that suit them best, the conditions for which nature has made them. The fish is happy in the water. If we should say, "Poor fish, come

out into the air and enjoy a little life and sunshine," it would die; it could not live in the sunshine. The best conditions for a fish are the ones which are necessary for its life. We can repeat this for all life. A tree must have its roots fixed in the ground; if we were to remove its roots, it would die. So each must have the conditions to suit its purpose. Each is happy to do what it can do. Every living thing has a heredity which puts it in a certain determined relation with the environment.

The most interesting fact is that when we look into the actions of all living things we see that each does not work for his own benefit only. There is an order in nature. This order comes because each one does its own work in its own place; if it did not, there could be no order. Suppose a crowd was going to a circus and each began to fight for the best place for himself. This is the old conception of nature. The conception according to adaptation to the environment by heredity is like a modern circus where everyone buys a ticket. The ticket may be for the best place or a poorer place on the left side or the right side, but each has his own ticket and looks for the place which corresponds to his ticket. Attendants are there to help. The help they give is to assist each person to find his seat. This is order.

When we have understood this order in nature we can see the strange fact that all living things do not only do things to benefit themselves, they also do things to benefit the environment. Take, for example, dung beetles and other scavengers. They are the sweepers of the earth; they keep the earth clean. It would be terribly dirty but for them, and it is the same with the creatures and animals who feed on dead bodies. Trees take in carbon dioxide from the air, a poison for animals, and emit oxygen, which is necessary for all animals. Thus they keep the air pure. If the trees did not do this, we should all die. The trees need this carbon dioxide for themselves, but at the same time they are doing this work for others. Nature has this beautiful arrangement whereby everyone does something for the betterment and conservation of the environment.

If vegetarian animals were allowed to multiply freely there would be too many. There is not enough food to go round and therefore there are animals that live on other animals; they kill off the surplus and so the balance is retained. If one of these agents of

nature were to stop doing its work there would be a calamity. For example, hordes of locusts could come, because something was lacking in their place of origin to keep them in check and they had, therefore, reproduced in abnormally large numbers.

We must study the correlation between life and the environment. In nature all is correlated. This is the purpose of nature. Nature is not concerned just with the conservation of individual life or with the betterment of itself. It is a harmony, a plan of construction. Everything fits into the plan: rocks, earth, water, plants, man, etc. This is not a philosophy but the exposition of a fact which we all can observe. It is a fact which is easy to understand because it can be seen. At our schools children of seven to eight years observe these facts; they study this plan of nature at an early stage because it gives them concrete ideas, ideas founded on facts instead of ideas founded on experiments or theories.

All animals and vegetables, superior animals, inferior animals, insects, etc., have a cosmic task. All are agents, maintainers and conservers of this order in the environment. They are not conscious of this, of course, as they are neither altruistic nor intelligent in their work. The trees do not say, "We are the benefactors of all people who live on the earth. They must all be grateful to us because we take poison from the air and give that which is the very life for them." Those animals that eat dead bodies do not say, "Look at the sacrifices I make, I eat this horrid stuff, which smells so awful, just for their sake. I take it out of their way. What a benefactor I am."

Each creature has something that guides its behaviour and adaptation to the environment; this guide is the instinct. The animals are not conscious of their instincts but each wishes to satisfy its instinct. The instinct of ferocious animals is to eat other animals. The instinct of some animals is to live in trees, of some to eat fruit; the instinct of some insects is to be attracted to flowers. How happy we think they must be. They like the smell and colour of flowers and inside the flowers they find a sweet drop of nectar to feed on. But this is lovely only to those particular insects.

They are not necessarily more refined or more aristocratic. The important thing is that each should do well whatever they are in-



Courtesy of Montessori High School at University Circle

tended to do. The butterfly does not know that in finding its food in flowers it is also doing a great service to the environment. It carries pollen from one plant to another in order that there may be more plants and more flowers on the earth; this is its great work, its cosmic task. The bee too collects nectar; it gives us honey. It ensures the continuance of plant life, but does not know that. When it does these things it is merely following its instincts.

All animals are considered to be egotists who just enjoy their own life while all the time they are obedient agents of the harmony of nature. It is beautiful to see these two sides of life, one conscious and the other unconscious. Man too has two sides. He has everything the animals have; only whatever he has is intensified. Man can be terribly ferocious, more ferocious than any animal. It is consoling to think that men have a tremendous task to do in this world, a task which they don't understand yet. This is a very important question for education.

I have these pictures to help make this clear to you ²¹. I am one of those people who cannot draw and my pictures are an exaggeration of the incongruous drawings of children. I will explain this one

²¹Another lost chart.

to you. The lower drawing represents the world of nature. There is an animal of each species. The animals are adapted to their environments and obey their heredity. These mammals, birds, reptiles, fishes, amphibians, trees, each has a heredity which forces it to do one thing (represented in the upper circle). To obey hereditary behaviour, the body is developed to act in a certain way; everything is adapted to its special function, like the trees that take in carbon dioxide and emit oxygen.

Now we will consider humanity. Man does not have this precise heredity to do one special thing. He is not by heredity adapted to one special geographical region; he is not obliged always to do just one thing. For instance, men are not always ferocious, they do not always kill each other. Men can do everything; they can go everywhere. We can speak about the freedom of men; it is a very different thing from obedience, which is limited to one work and one place. Men are adapted to every place and every kind of work.

Consider another important thing: man has changed continuously in his evolution. If he was only adapted to the beautiful peaceful life of the country, he would not be able to live in modern New York. Man can change his environment and change often. There have been such great changes in civilization. Man is capable of everything but has no heredity for anything. This sounds like a strange fact. But from this stems the obvious fact that every man must prepare in himself an adaptation that is not hereditary. He must prepare his own adaptation. This is the great difference between men and animals. Man works in himself and prepares his own adaptation to the environment.

Look at this second circle above the first. It represents the world of man. It is yellow, the colour of the spiritual and intellectual; it contains only one figure. It is like the urge of humanity. It is a great task, which is given to man and which necessitates that each individual should bring about his own adaptation. All other living things are already prepared at birth; man instead must prepare his adaptation himself, in infancy. All animals have one task, but for man there are many kinds of work and therefore he must have a special adaptation. This is what I propose to explain during this course.

Look at humanity here at the top of the plan I have drawn. Does he have a cosmic task in the environment? This great man with his great intellect, with his special adaptation, does he have a purpose on this earth or is he here only to enjoy it? Look how man is spread all over the surface of the earth in the icy regions, in the deserts, the plains, the mountains, on the seas, everywhere. He is finding his way in the atmosphere now. Is this all for his pleasure or does he also have a task in relation to the surface of the earth?

Today's books on geology and ecology are beginning to address the fact that man has the power of modification. Other living beings conserve the environment, but man's task is evidently more complex, the modification of the earth. One scientist said, "In the path of humanity on earth the earth is transformed: the plants are more beautiful, the earth produces more; everywhere man has passed there is more beauty." This purpose of man is like that of a man who prepares a house for his bride. He does all he can to make the house beautiful, the furniture, curtains, etc., are the best he can get. A mayor of a city plans to make his city better, to have houses built, to create larger streets, and to keep the whole city clean.



Maria Montessori, 1949

This is the modification of the environment which man carries out, and it is in this way that he must be considered. He modifies trees, plants and animals. His power is not the power of God – it is a limited power – but look at what he has achieved. He has domesticated animals and, in doing so, modified them. He has given them different conditions of life and so modified their heredity a little. Man has tried to domesticate all the animals and has succeeded with a few. He modifies the soil. He has planted forests. He has made many things with his hands.

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In order to modify the environment man must work, and this work is essentially manual labour. Man's intelligent work on earth has come about especially by working with his hands. Man must modify everything. Not all at once, but little by little. Over thousands of years, man has been perfecting his work and spreading the progress of civilization. Man takes all that exists in nature and puts it on a higher plane, that of *Supernature*.

This is a great task, and not a task which can be done by heredity, because there are always fresh tasks to be done.

The great power of man is that he adapts to the environment and modifies the environment. For this reason every man that is born must prepare his personality anew. There is no heredity in individuals but each must prepare something which corresponds to heredity, in the same way that every child is born in a certain place but does not have the character of the group into which he is born at birth; he has to create and prepare it. He has to make the language his own and adapt to the environment.

We must see this vision of man in correlation with the environment and his adaptation to it.

