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THE ABSORBENT MIND



Maria Montessori

THE ABSORBENT MIND

by

Maria Montessori

M.D., D.Litt., F.E.I.S.

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INTRODUCTION

THE present volume is based upon the lectures given by Dr. Maria Montessori at Ahmedabad, during the first Training Course after her internment in India which lasted up to the end of World War II. In it she exposes the unique mental powers of the young child which enable him to construct and firmly establish within a few years only, without teachers, without any of the usual aids of education, nay, almost abandoned and often obstructed, all the characteristics of the human personality. This achievement by a being, weak in its physical powers, who is born with great potentialities, but practically without any of the actual factors of mental life, a being who may be called a zero, but who after only six years already surpasses all other living beings, is indeed one of the greatest mysteries of life. In the present volume Dr. Montessori not only sheds the light of her penetrating insight, based on close observation and just appreciation, on the phenomena of this earliest and yet most decisive period of human life, but also indicates the responsibility of adult humanity towards it. She, indeed, gives a practical meaning to the now universally accepted necessity of "education from birth". This can be given, only, when education becomes a "help to life" and

transcends the narrow limits of teaching and direct transmission of knowledge or ideals from one mind to another. One of the best known principles of the Montessori Method is "the preparation of the environment"; at this stage of life, long before the child enters a school, this principle provides the key to the realization of an education from birth, to a real cultivation of a human individual from its very beginning. This is a plea made on scientific foundations, but it is the plea also of one who has witnessed and helped the manifestations of child-nature all over the world, manifestations of mental and spiritual grandeur, which form a startling contrast to the picture shown by mankind which, abandoned during its formative period, grows up as the greatest menace to its own survival.

MARIO M. MONTESSORI

Karachi, May 1949.

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CHAPTER I

THE CHILD AND WORLD RECONSTRUCTION

THIS book is a link in our campaign to defend the great powers of the Child. To-day while our world is being torn apart, here and there one hears of plans being formulated for future reconstruction. One of the means which is envisaged for the purpose is education. Indeed the intensifying of education, the return to religion is recommended generally. I too feel that humanity is not yet ready to take part in the evolution that it desires so ardently, the construction of peaceful and harmonious society, the elimination of wars. Men are not sufficienty educated to control the events, rather they become the victims of them. Although education is recognised as one of the means for the uplift of humanity, it is conceived as an education of the mind only ; some superior sort of ordinary education is still envisaged.

Philosophies and religions are said to give a contribution, it may be true, but how many philosophers are there in the ultra-civilised world of today and how many have there been before and how many more will there be

in future ? Noble ideas, great sentiments have always existed and have always been transmitted, but wars have never ceased. And if education were to be conceived along the old lines of transmitting knowledge, the problem would remain without solution for ever. Indeed, there would be no hope for the world. It is not transmission of knowledge that is required, the consideration of the human personality alone can lead us to salvation. And we hold in front of our eyes a psychic entity, a social personality, immense in multitude of individuals, a world power that must be taken into consideration. If salvation and help are to come, it is through the child ; for the child is the constructor of man.

The child is endowed with an unknown power and this unknown power guides us towards a more luminous future. Education can no longer be the giving of knowledge only ; it must take a different path. The consideration of personality, the development of human potentialities must become the centre of education. When to begin such education ?

The greatness of the human personality begins from the birth of man. This is an affirmation full of reality and strikingly mystic at the same time. But, practically speaking, how can one give lessons to a child that is just born, or even to children in the first or second year of life ? How can we imagine giving lessons to a babe ? He does not understand when we speak, he does not even know how to move ; so how can he learn ? Is it

perhaps hygiene merely that is intended when we speak of education of small children? Certainly not! In modern times the psychic life in the new-born child has called forth great interest. Many scientists and psychologists have made observations of children from 3 hours to the 5th day from birth. Others, after having studied children carefully, have come to the conclusion that the first two years are the most important of life. Education during this period must be intended as a help to the development of the psychic powers inherent in the human individual. This cannot be attained by teaching because the child could not understand what a teacher would say.

Unexploited Riches

Observation, very general and wide-spread, has shown that small children are endowed with a special psychic nature. This shows us a new way of imparting education! A different form which concerns humanity itself and which has never been taken into consideration. The real constructive energy, alive and dynamic, of children, remained unknown for thousands of years. Just as men trod upon the earth first and cultivated its surface in later times, without knowing of or caring for the immense riches that lay hidden in the depth, so is man now-a-days progressing in civilisation without knowing of the riches that lie buried inside the psychic world of the child and indeed, for thousands of years, from the

very beginning of humanity itself, man has continued repressing these energies and grinding them into the dust. It is only today that a few have begun to suspect their existence. Humanity has begun to realise the importance of these riches which have never been exploited —something more precious than gold ; the very soul of man.

These first two years of life furnish a new light that shows the laws of psychic construction. These laws were hitherto unknown. It is the outer expression of the child that has revealed their existence. It shows a type of psychology completely different from that of the adult. So here begins the new path. It is not the professor who applies psychology to children, it is the children themselves who teach psychology to the professor. This may seem obscure but it will become immediately clear if we go somewhat more into detail : the child has a type of mind that absorbs knowledge and instructs himself. A superficial observation will be sufficient to show this. The child of two speaks the language of his parents. The learning of a language is a great intellectual acquisition. Now who has taught the child of two this language ? Is it the teacher ? Everyone knows that that is not so, and yet the child knows to perfection the names of things, he knows the verbs, the adjectives etc. If anyone studies the phenomenon he will find it marvellous to follow the development of language. All who have done so agree that the child begins to use words and names at a certain

period of life. It is as if he had a particular time-table. Indeed, he follows faithfully a severe syllabus which has been imposed by nature and with such exactitude that even the most pains-taking school would suffer in comparison. And following this time-table the child learns all the irregularities and different syntactical constructions of the language with exacting diligence.

The Vital Years

Within a child there is a very scrupulous teacher. It is he who achieves these results in every child, no matter in what region he is found. The only language that man learns perfectly is acquired at this period of childhood when no one can teach him. Not only that, but no matter what help and assistance he will get later in life if he tries to learn a new language, he will not be able to speak it with the same exactitude as he does the one acquired in childhood. There is a psychic power in the child that helps him. It is not merely a question of language. At two years he is able to recognise all the things and persons in his environment. The more one thinks about it the more it becomes evident that the construction the child achieves is immense : for all that we possess has been constructed by the child we once were, and the most important faculties are built in the first two years of life. It is not merely a question of recognising what it is around us or understanding and dealing with our environment. It is the whole of our

intelligence, our religious sentiment, our special feelings of patriotism and caste that are built during this period of life when no one can teach the child. It is as though nature had safeguarded each child from the influence of human intelligence in order to give the inner teacher that dictates within, the possibility of making a complete psychic construction before the human intelligence can come in contact with the spirit and influence it.

At three years of age the child has already laid the foundations of the human personality and needs the special help of education in the school. The acquisitions he has made are such that we can say the child who enters school at three is an old man. Psychologists say that if we compare our ability as adults to that of the child it would require us 60 years of hard work to achieve what a child has achieved in these first three years. And they express themselves by the strange words that I have mentioned above : at three a child is already an old man. Even then this strange ability of the child to absorb from the environment is not finished. In our first schools the children came at three years of age ; no one could teach them because they were not receptive. But they gave striking revelations of the greatness of the human mind. Our school is not a real school ; it is a house of children, *i.e.*, an environment specially prepared for the children where the children absorb whatever culture is spread in the environment without any one teaching them. In our first school the children who attended came from the

lowest class of people ; the parents were quite illiterate. Yet these children at 4 years knew how to read and write. Nobody had taught them. Visitors were surprised to see children of so tender an age writing and reading. " Who has taught you how to write ? ", they asked and the children would look up in wonder and answer, " Taught ?—no one has taught me ". This seemed at the time a miracle. That children so small could write was in itself wonderful, but that they should do so without having received any teaching seemed impossible. The press began to speak about 'spontaneous acquisition of culture'. Psychologists thought that these children were special children and we shared this opinion for a long time. It was only after some years that we perceived that all children have this power of absorbing culture. If this is so, we reasoned, if culture can be taken in without fatigue then let us put different items of culture for them to absorb. So the children absorbed much more than reading and writing, subjects like botany, zoology, mathematics, geography and so on were taken with the same ease, spontaneously, without any fatigue.

So we found that education is not what the teacher gives : education is a natural process spontaneously carried out by the human individual. It is acquired not by listening to words, but by experiences upon the environment. The task of the teacher then becomes not one of talking, but one of preparing a series of motives of cultural activity spread in a specially prepared environment.

My experiences have lasted for 40 years now and as the children developed, here and there, in different nations, parents asked me to continue the education for older children and so we found that individual activity is the only means of development : that this is true for the pre-school child as well as for the young people in primary and other schools.

The New Man Arises

In front of our eyes arose a new figure. It was not a school or education. It was Man that rose ; Man who revealed his true character as he developed freely ; who showed his greatness when no mental oppression was there to restrict his soul. And so I say that any reform of education must be based upon the development of the human personality. Man himself should become the centre of education. And it must be remembered that man does not develop only at the university : man starts his development from birth and before birth. The greatest development is achieved during the first years of life, and therefore it is then that the greatest care should be taken. If this is done, then the child does not become a burden ; he will reveal himself as the greatest marvel of nature. We shall be confronted by a child not as he was considered before—a powerless being—an empty vessel that must be filled with our wisdom. His dignity will arise in its fullness in front of our eyes as he reveals himself as the constructor of our

intelligence, as the being who, guided by the inner teacher, in joy and happiness works indefatigably, following a strict time-table, to the construction of that marvel of nature : MAN. We, the human teachers, can only help the great work that is being done, as servants help the master. If we do so, we shall be witnesses to the unfolding of the human soul, to the rising of a New Man who will not be the victim of events, but who will have the clarity of vision to direct and shape the future of human society.

CHAPTER II

EDUCATION FOR LIFE

The School and Social Life

IT is necessary from the very beginning to have an idea of what we intend by an education for life that starts from birth and even before birth. It is necessary to go into detail about this question, because recently, for the first time, a leader of the people has formulated the necessity not only of extending education to the whole course of life, but also of making 'defence of life' the centre of education. I say for the first time when I refer to a political and spiritual leader, because science has not only expressed the necessity of it, but from the beginning of this century it has given positive contributions which show that the conception of extending education to the whole life can be done with certainty of success. Education, as a help and protection to life, is an idea which certainly has not entered the field of action of any ministry of education, neither in America—North or South—nor in Europe. Education as conceived up to today is rich in methods, in social aims and finalities, but it takes hardly into any consideration whatever

life itself. There are many official methods of education adopted by different countries, but no official system of education considers life itself or sets out to protect development and help the individual from birth. If education is protection to life, you will realize that it is necessary that education accompany life during its whole course. Education as conceived today prescinds from both biological and social life. If we stop to think about the question we soon realise that all those who are undergoing education are isolated from society. Students must follow the rules established by each institution and adapt themselves to the syllabus recommended by the ministry of education. If we think about it we find also that in these schools no consideration is given to life itself. If the high school student for instance has not enough food, that is no concern of the school. In the recent past if there were children who were partly deaf, they were marked out by their receiving lower marks because they were unable to hear what the teacher said, but the defects of the child were not taken into consideration. If a child was defective in sight he also received bad marks because he could not write as beautifully as other children. Physical defects have not been taken into consideration until very lately and when this was done, it was from the point of view of hygiene. Even now, however, no one worries about the danger there is for the mind of the student, danger due to defects in the methods of education adopted. What school worries

about the kind of civilisation the children are forced to live in ? The only thing officialdom is bothered about is whether or not the syllabus has been followed. There are social deficiencies apt to strike the spirit of young men attending the university and which do strike them, but what is the official admonition ? " You students should not concern yourselves with politics. You must attend to your studies and after you have formed yourselves, then go into the world ". Yes. That is quite so, but education today does not form an intelligence capable of visualising the epoch and the problems of the times in which they live. Scholastic mechanisms are foreign to the social life of the times : its study does not enter the realm of education. Who has ever heard of any ministry of education that is called upon to solve any social problem acutely felt in the country ? Never has such a case occurred because the world of education is a sort of retreat where the individuals, for the whole of their scholastic life, remain isolated from the problems of the world. They prepare themselves for life by remaining outside of life.

There may be, for instance, a university student who dies of tuberculosis. That is very sad indeed. But as a university, what can be done ? At the most it can provide to be represented at the funeral. There are many individuals who are extremely nervous ; when they go into the world, they will be useless not only to themselves, but will be a cause of trouble to their family

and to their friends. That may be so, but I, as authority, am not concerned with peculiarities of psychology. I am only concerned with studies and examinations. Who passes them will receive a diploma or a degree. That is as far as the schools of our times go. Those who study sociology or problems of society have said that the people who come from school or university are not prepared for life, not only that, but most are diminished in their possibilities. Sociologists have compiled statistics and have found that there are many criminals, many mad and many more who are considered 'strange': they conclude by saying that the schools must do something to remedy this.

This is a fact. The school is a world apart and if there are social problems the school is expected to ignore them. It is the sociologists who say that schools must do something, but the school itself has not the possibility of doing so, because the school is a social institution of long standing and its rules cannot be modified unless there is some outside power which enforces this modification. These are some of the deficiencies that accompany education and therefore the life of all who go to school.

The Pre-School Age

What about the child from birth to the seventh year, or of the child before its birth? It is taken into no consideration whatever by the school. This age is called

pre-scholastic and this means it falls outside the concern of the school. And as to people who are just born what could the school do about them ? Wherever institutions have been created for children of pre-school age, these are hardly ever governed by the ministry of education. They are controlled by municipalities or private institutions who dictate their own rules and regulations. Who is concerned as a social problem with the protection of the life of the small child ? No one ! Society says that small children belong to the family and not to the state.

Today great importance is given to the first years of life. But what is it that is being recommended ? A modification of the family, a modification in the sense that mothers must be educated. Now, the family does not form a part of school, but of society. So we see how the human personality or the care of the human personality is broken into pieces. On one side there is a family which is one part of society, but is generally isolated from society, from social care. On the other the school, also kept apart from society, and then the university. There is no unitarian conception of the social care of life. There is one piece here, one piece there and each one ignores the other. Even those new sciences that reveal the harm of this isolation such as social psychology and sociology are themselves isolated from the school. So nowhere is there a reliable system of help for the development of life. When a statesman says that education must be a help to life, we realise the importance

of it. It is, as I mentioned before, nothing new to abstract science, but socially it is something that does not yet exist. It is the next step to be taken by civilisation. Everything is prepared however : criticism has revealed the errors of the existing conditions, others have shown the remedy to be applied at different stages of life. Everything is ready for the construction. The contributions of science may be compared to the stones cut and ready for the building, but what is necessary is some one who takes the stones and puts them together to make the new building necessary for civilisation. That is why the resolution of this Indian leader is of such great importance. It is a step that will permit civilisation to rise higher and it is to the building of this step, that in the field of applied science, we strive and work.

The Task of Education and Society

What is the conception of education that takes life as the centre of its own function ? It is a conception that alters all previous ideas about education. Education must no longer be based upon a syllabus but upon the knowledge of human life. Now, if this is so—and it has to be so—the education of the new-born acquires a sudden great importance. It is true that the new-born cannot do anything, cannot be taught in the ordinary sense, it can only be observed, it can be studied so as to find out what are the needs of the new-born life. Observation has been carried out by us with a view of

discovering what are the laws of life, because if we wish to help life the first thing we must do is to know the laws governing life. Not only this, because if it were merely knowledge that we sought then we would remain in the field of psychology ; but if we are concerned with education our action cannot be limited merely to knowledge. This knowledge must be spread, for all must know what is the psychic development of the child. Education then acquires a new dignity, a new authority, because education will then tell society : " These are the laws of life. You cannot disregard them and you must act in this way."

Indeed if society wishes to give compulsory education it means that education must be given, practically, otherwise one cannot call it compulsory ; and if education is to be given from birth, then it is necessary for society to know what are the laws of the development of the child. Education can no longer remain isolated from society but must acquire authority over society. Social machinery must arrange itself around what is to be done so that life be protected. All must be called upon to collaborate : mothers and fathers must, of course, do their part well, but if the family has not sufficient means, then society must give not only knowledge, but enough means to educate the children. If education means care of the individual and if society recognises that such and such a thing is necessary for the child for its development and the family is not capable of providing for it, then

it must be society which provides for the child. The child must not be abandoned by the state. Thus education, instead of remaining apart from society, is bound to acquire authority over society. It is evident that society must have control over the human individual, but if education is considered as a help to life, this control will not be one of restraint and oppression, but a control of physical help and psychic aid. It will be realised by these few words that the next step for society is that of allotting a great deal of money to education.

Step by step the needs of the child during the years of growth have been studied scientifically and the results of this study are being given out to society. The education conceived as a help to life takes in every one—not only the child. That means that social conscience must take over responsibility for education and that education will spread its knowledge to the whole of society in every step it takes, instead of remaining isolated from society as it does today. Education as protection to life affects not only the child, but the mothers and fathers as well as the state and international finance. It is something which moves every part of society, indeed it is the greatest of social movements. Education as it is today! Can we imagine anything more immobile, stagnant and indifferent? Today if economy is to be made in a state, education is the first victim. If we ask any great statesman about education he will tell us: "I do not know anything about education. Education is a specialisation.

I have even entrusted the education of my children to my wife and she has given them to the school." In future it will be absolutely impossible for any head of the state to answer in this fashion when one speaks about education.

The Child Builder of Man

Now, let us take another point. Let us take the statements made by different psychologists who have studied small children from their first year of life. What conception does one derive from them ? Generally that from now on instead of growing haphazardly, the individual will grow scientifically, with better care. He will achieve better development and growth. This is the common idea : " The individual will grow stronger, the individual will grow more balanced in mind and have a stronger character ". In other words the extreme conception is that besides being provided with physical hygiene, the growing child will be provided with mental hygiene. But this cannot be all. Let us suppose that science has made some discoveries about this first period of life, and this is not merely a supposition. Indeed there are powers in the small child that are far greater than is generally realised, because it is in this period that the construction, the building-up of man takes place, for at birth, psychically speaking, there is nothing at all— zero ! Indeed not only psychically, for at birth the child is almost paralytic, he cannot do anything, he cannot speak, even though he sees all that happens around him.

And behold him after a while ; the child, talking, walking and passing on from conquest to conquest until he has built up man in all his greatness, in all his intelligence. If we consider this we begin to have a glimpse of reality. The child is not an empty being who owes whatever he knows to us who have filled him up with it. No, the child is the builder of man. There is no man existing who has not been formed by the child he once was. In order to form a man great powers are necessary and these powers are possessed only by the child. These great powers of the child which we have described for long, and which at last have attracted the attention of other scientists, were hitherto hidden under the cloak of motherhood, in the sense that people said that it is the mother who forms the child, the mother who teaches him to talk, walk etc., etc. But I say that it is not the mother at all. It is the child himself who does all these things. What the mother produces is the new-born babe, but it is this babe who produces the man. Suppose the mother dies, the child grows just the same. Even if the mother is not there, and even if the mother has not the milk necessary to feed him, we give other milk to the child and that is how he continues to grow. It is the child who carries out the construction and not the mother. Suppose we take an Indian child to America and entrust him to some Americans. This child will learn the English language and not an Indian language. By English, we mean American English. So it is not the mother

that gives the knowledge. He takes it himself and if these Americans really treated the child as one of their own, this Indian child would acquire the habits and customs of the American people and not those of the Indian people. So none of these things is hereditary. The father and mother cannot claim the credit : it is the child who, making use of all that he finds around him, shapes himself for the future.

The child needs special aid in order to build man properly and society must give this its attention. Recognising the merits of the child does not diminish the authority of the father and the mother for when they come to realise that they are not the constructors, but merely the helpers of this construction, then they will be able to do their duty better ; they will help the child with a greater vision. Only if this help is well given will the child achieve a good construction, not otherwise. So the authority of parenthood is not based upon an independent loftiness but upon the help that is given to the child. Parents have no authority other than that. Let us consider another aspect. Everyone will have heard of Karl Marx who was the originator of a social reform when he made the workers realise that whatever society enjoys was due to their work and that everything we have in our environment has been made by some man or woman. Our daily life is based upon these workers and if they ceased to produce, our social and political life would cease. This is part of the theory of Karl Marx.

The workers are those who really give us the possibility of carrying on our lives ; they produce the environment and provide everything, food, clothing, every means of life. When people realised this, the working man no longer appeared as the poor labourer who depended for his bread on his employer ; he assumed his real importance. Previous to that all importance was given only to princes, kings and capitalists, but later the merits of the workers came to light. And the real contribution of the capitalist was realised as the supplier of the means that the workers needed to carry out their work ; also that the better were the conditions afforded to the worker, the better and more accurate was his product.

Let us carry this idea into our field. Let us realize that the child is the worker who produces man. The parents furnish the means of construction to the worker. The social problem confronting us then is of much greater importance, because from the children's work, humanity itself is produced, not an object. Childhood does not produce one race, one caste, one social group, but it produces the whole of humanity. This is the reality that humanity must envisage : it is the child that society must take into consideration, this worker who produces humanity itself. The two social questions really present a striking resemblance, *e.g.* before Karl Marx expounded this idea, the working men were not considered. They had to do whatever they were told just as the child has to ; the workers' needs and his

dignity as a man were not considered. In the work of the child, the needs of life—physical and psychic—are not considered, and his dignity of man is non-existent. What have socialists and communists done ? They have started a movement in order to obtain better conditions of life for the working man. Also to the child, this constructor, we must give better means of life. Workers ask for more money ; more money must also be given to those who produce humanity. The workers wish to free themselves from restraints and repressions. We must free childhood from repression that weighs upon it. The conditions of this constructor of man are more dramatic than those of the constructor of the environment. Bettering the conditions of life for the constructor of man will bring about a betterment in humanity. We must follow this great worker from the moment he starts, at birth, follow him until he reaches adulthood ; and provide him with means necessary for a good construction. We must remember that he is going to form that humanity which with its intelligence is building civilisation. The child is the builder of our intelligence, and it is our human intelligence which guides our hands and produces what we call civilisation.

If life itself is taken into consideration and studied, we shall know the secret of humanity. We shall have in our hands the power of governing and helping humanity. The social vision of Karl Marx brought about a revolution. It is a revolution that we are preaching when we speak

about education. It is a revolution inasmuch as everything that we know today will be changed. Indeed I consider it the last revolution. It will be a non-violent revolution because if the slightest violence is offered to the child, then his psychic construction will be faulty. This delicate construction of human normality, as it should be, needs protection ; it must be carried out without the slightest violence being offered to it. Indeed all our effort has been to remove obstacles from the path of the growth of the child. We have taken away from him the dangers and misunderstandings that surrounded him.

This is what is intended by education as a help to life ; an education from birth that brings about a revolution: a revolution that eliminates every violence, a revolution in which everyone will be attracted towards a common centre. Mothers, fathers, statesmen—all will be centred upon respecting and aiding this delicate construction which is carried on in psychic mystery following the guide of an inner teacher.

This is the new shining hope for humanity. It is not so much a reconstruction, as an aid to the construction carried out by the human soul as it is meant to be, developed in all the immense potentialities with which the new-born child is endowed.

CHAPTER III

THE PERIODS OF GROWTH

ACCORDING to the modern psychologists who have followed children from birth to university age, there are in the course of development different and distinct periods. This conception is different from the one which was held previously and which considered that the human individual when young holds very little and then becomes more capable as it grows, the conception of something small that developed, *i.e.*, something small which grows, but which holds always the same form. That was the old conception about the human mind. Today psychology recognises that there are different types of psyche and different types of mind at different periods of life. These periods are clearly distinct from one another. It is curious to say that these periods correspond to different phases in the development of the physical body. The changes are so great, psychically speaking, that certain psychologists, trying to render them clear, have exaggerated and they have expressed themselves in this fashion : " Growth is a succession of births."

At a certain period of life, a psychic individuality ceases and another is born. These successive births take place during the period of growth. The first of these periods goes from birth to six years. This period shows notable differences, but during its whole length the type of mind is the same. From zero to 6 the period shows two distinct sub-phases. The first from 0 to 3 years shows a type of mentality which is unapproachable by the adult, *i.e.*, upon which the adult cannot exert any direct influence and, indeed, there is no school for such children. Then there is another sub-phase from 3 to 6 in which the type of mind is the same, but the child begins to become approachable in a special manner. This period is characterised by the great transformations that take place in the individual. In order to realise this, it is sufficient to think about the difference there is between a new-born babe and a child of 6. How this transformation takes place does not concern us for the moment, but the fact is that at 6 years the individual becomes, according to the usual expression, intelligent enough to be admitted to school.

The next period is from 6 to 12 years. This period is one of growth, but without transformations. It is a period of calm and serenity. It is also psychically speaking a period of health and strength and security. Now if we look at the physical body, we see signs that seem to mark the limit between these two psychic periods. The transformation that takes place in the body is very visible. I

will cite only one item : the child loses his first set of teeth and starts growing the second.

Then there is the third period which goes from 12 to 18 years, which is also a period of such transformation that it reminds us of the first period. This last period can also be sub-divided into two sub-phases, one that extends from 12 to 15 and one from 15 to 18. This period is also distinguished physically by transformations in the body which achieves maturity. After 18 man is considered completely developed and there is no longer any considerable transformation. Man merely becomes older.

The curious thing is that official education has recognised these different psychic types. It seems to have had a subconscious intuition of them. The first period from 0 to 6 years of age has been clearly recognised because it has been excluded from compulsory education and it has been noticed that at 6, there is a transformation. People seem to have reasoned that the child of 6 years is sufficiently intelligent to be admitted to school. In doing so they have unconsciously admitted that the child knows a great many things ; for if he were completely ignorant, he would not be able to attend school. If, for instance, children do not know how to orientate themselves, how to walk, how to understand when somebody talks and so forth, even at 6, they would be unable to attend school. So we might say that this has been a practical recognition. But they never thought,

these educators, that if the child can come to school, find his way about and understand the ideas transmitted to him, he must have learned to do so, because at birth he was unable to do any of these things. Who has taught him then ? Not the teachers, because, as we saw, during this period the child is excluded from school. It has never even entered their minds that there must be a very elaborate procedure to enable the new-born individual who had no intelligence, no co-ordinated movement, no will, and no memory, to understand what we say.

An unconscious recognition was also given to the second period, because in many countries at 12 years of age children generally leave the elementary school and enter high school. Why have they chosen the period from 6 to 12 and why do they consider it the proper period in which to give the basic and elementary items of culture ? As this happens in every country of the world, it means that it was not done by chance. It means that there must be a psychic basis common to all children that made this possible. It had been recognised by reasoning based upon experience. It has been found that during this period, the child can submit to the mental work necessary in schools. He understands what a teacher says and he has enough patience to listen and to learn. During this whole period, he is constant in his work, as well as strong in health. It is because of these characteristics that this period is considered as the most profitable for imparting culture.

After the 12th year of age, usually there is the beginning of a higher sort of school. By this official education has recognised that at that year a new type of psychology begins in the human individual. That this type has two divisions has also been felt. It is shown by the fact that they have divided high schools into two parts.

We have in our country an inferior and a superior high school. The inferior high school lasts three years and the superior sometimes two and sometimes three. Here we have a period which is not as smooth and calm as the preceding one. Psychologists say that it is a period of such psychic transformation that it may be compared to the first period from 0 to 6. Usually during this period the character is not steady, there is indiscipline and some sort of rebellion. Physical health also is not as strong and secure as during the second period. But the school pays no heed to this. A certain syllabus has been elaborated and children are forced to follow it, whether they like it or not. In this period also the children have to sit and listen to the teachers, have to obey implicitly and spend their time memorising things.

Then comes the university. The university also does not differ essentially from the types of school that precede it, except perhaps by the intensity of study. Here also the professors come, they talk and students listen. When I was young, men did not shave, they had beards. And it was curious to see in the lecture halls

all these men fully bearded, some of them with pointed beards, some with square ones ; some had long beards and some had them short, while the most different varieties of moustaches were displayed. Yet all these men—mature and more than mature—were as little children. They had to sit and listen ; they had to submit to the jibes of the professors ; they had to depend for their cigarettes, for their street-car fares on the liberality of their fathers who scolded them if they failed in the examinations. They were adult men ! These men, whose intelligence, whose experience was going to direct the world, whose instrument of work was to be the intelligence and to whom were alloted the highest professions, were the future doctors, engineers, lawyers. And what good is a degree today ? Is one's life assured on receiving one's degree ? Who goes to a doctor who has only just received it ? And if somebody wants to build a beautiful house, does he go and ask the services of a newly fledged engineer. Or if I have a law suit on my hands, am I going to employ a newly accredited lawyer ? No. And why ? For the simple reason that all these years of study, all these years of listening, do not form ' man ' ; only practical work and practice do that. Thus we find that young doctors have to serve in hospitals, and lawyers have to practise in the office of an established lawyer. The same plan has to be followed for the engineer. This apprenticeship lasts for years and years, before they can have a practice of their own. And in order to be able

to find a place to practise, they must have an opportunity and protection. There have been very strange cases resulting from this in many countries. A typical one took place in New York. There was a procession exclusively of intellectuals ; hundreds of them who had been unable to find any sort of employment. They bore a banner with this information : "We are without work ; we are starving. What are we to do ?" Such is the situation, even today. There is no planning. Education is without control, but some sort of acknowledgement is given to the fact that during growth there are different types at different periods of life. There are different mental types and to each mental type has been allotted a different phase of education, elementary, high school and university.

The Period of Creation

When I was young, the children from 2 to 6 years were not taken into consideration at all. Now there are pre-school institutions of different kinds. There is the crêche for small children and the so-called Montessori school, nursery and kindergarten schools for children from 3 to 6. But today, as then, the most important part of education is considered to be university education, because from the university come the people who have best cultivated that part of man's mind which we call intelligence. Now that the psychologists have come to study life, there is a tendency to go to the other extreme, and there are other people besides me who say that the

most important part of life is not the university, but the first period—the period that extends from 0 to 6 years, because it is during this first period that intelligence, the great instrument of man, is formed ; and not only intelligence, but the whole of the psychic faculties are constructed during this period. This has made a great impression upon all who have had any sensibility towards psychic life. Today many meditate upon the small child ; upon the new-born, and the one year old, who create the personality of man ; and they feel the same emotion, the same deep impression as those who in olden times used to meditate upon death. What is it that takes place when death comes ? This is what attracted meditation and sentimentality in the past. Today a similar meditation is being carried out upon man who has just entered the world. This is a Man, this is the being who has been created with the highest and loftiest intelligence. Why is he to have such a long and painful infancy ? No animal has a period of infancy so painful and so long. This is what attracts the attention of the thinkers. "What is it that takes place during this period ?" they ask themselves.

Certainly it is a period of creation because before nothing existed, and then, a year or so after birth, the child knows everything. It is not as if a child were born with a little bit of intelligence, with a little bit of memory, with a little bit of will which after a while grows. There is nothing ! Individuality starts from zero ! It is not as

though there were a little voice that later developed, as is the case, for instance, for the kitten, who at birth is able to mew even if imperfectly, or for the bird or the calf. Man is absolutely mute. The only means of expression he has is that of crying. In the case of the human being, it is not a question of development. It is a question of creation that starts from zero. If you do not exist, you cannot hope to grow. That is the tremendous step the child takes, the step that goes from nothing to something. We are not capable of it. Our mind is not capable of it.

A type of mind different from ours, endowed with different powers is necessary to accomplish this. And it is not a small creation that the child achieves. It is the creation of all. He creates not only the language, but the organs that make it possible for us to speak. Every physical movement he creates, every side of our intelligence. He creates all that the human mind, the human individual is endowed with. It is a tremendous achievement !

This is not done with a conscious mind. We are conscious ; we have a will and if we want to learn something, we go about it. There is no consciousness in the small child, no will. For both consciousness and will have to be created. The child's mind is not the type of mind we adults possess. If we call our type of mind the conscious type, that of the child is an unconscious mind. Now an unconscious mind does not mean an inferior mind. An unconscious mind can be full of intelligence. One will

find this type of intelligence in every being and every insect has it. It is not a conscious intelligence even though sometimes it looks as if it were endowed with reason. It is of an unconscious type and while he is endowed with it the child performs his wonderful achievements. The child of one year has already seen all things that are in his environment and is capable of recognising them.

How has he been able to take in this environment ? This is due to one of the special characteristics that we have discovered in the child : a power of such intense sensitivity that the things which surround him in the environment awaken in him an intense interest and such a great enthusiasm that they seem to penetrate into his very life. The child takes all these impressions not with his mind, but with his life. The acquisition of language is the most evident example of this. How is it that the child acquires language ? It is said that the child is endowed with the sense of hearing, that he hears the voice of the human being and thus he learns to speak. Let us admit this. It is a fact. Why, however, amongst all the millions of different sounds and noises that surround him, does he hear just the voice of man ? If it is true that the child hears, and if it is true that he takes only the language of human beings, it means that the human language must have made a great impression on the child. These impressions must be so strong, they must cause such an intensity of feeling and such a great enthusiasm as to set in motion invisible fibres within the body that begin

to vibrate in order to reproduce those sounds. We can compare it to something similar in ourselves. Sometimes one goes to a concert. After a while one begins to see rapt expressions on the faces of the public ; heads and hands begin to move. What has brought them into movement if not the impressions caused by the music ? Something similar must happen in the unconscious mind of the child. The voice causes such impressions that the impressions aroused in us by music seem almost non-existent in comparison. One can almost see these movements of the tongue that thrills, of the minute chords that tremble and of the cheeks, everything vibrating and becoming tense, preparing in silence to reproduce those sounds that have caused so much emotion in the unconscious mind. And how is it that the child acquires language in its exactness ? It is so exactly and firmly acquired that this language forms part of his psychic personality, it is called his mother-tongue, and it is as clearly distinguished from all other languages that he may learn, as a set of false teeth may be distinguished from the natural set. How is it that these sounds which in the beginning have no meaning suddenly bring to his mind understanding, ideas ? He has not merely taken in the words. He has taken 'the sentence, the construction of the sentence.' If we do not understand the construction of the sentence, we cannot understand language. If we say, for instance, "the glass is on the table" it is the order of the words that gives the sense.

If one said to them, " glass the on is table " it would be difficult to get the idea. It is the sequence of words that we understand. The child has absorbed the constructions of the language.

The Absorbent Mind

How does it take place ? It is said " he remembers these things ", but in order to remember, he has to have memory and he had no memory ; he has still to construct it. He would have to have the power of reasoning in order to realise that the construction of a sentence is necessary in order to understand it. But he has no reasoning power. He has to construct it.

Our mind, such as it is, could not do it ; to accomplish it a different type of mind is needed, and that is what the child possesses, a type of intelligence different from ours. We might say that we acquire with our intelligence, the child absorbs with his psychic life. The child merely by going on with his life, learns to speak the language belonging to his race. It is like a mental chemistry that takes place in the child. We are vessels ; impressions pour in, and we remember and hold them in our mind, but we remain distinct from our impressions, as water remains distinct from the glass. The child undergoes a transformation. The impressions not only penetrate the mind of the child, but form it. They become incarnate. The child makes its own ' mental flesh ' by using the things that are in his environment. We have

called his type of mind '*Absorbent Mind*'. It is difficult for us to conceive the powers of the absorbent mind of the small child, but certainly it is a privileged form of mind. If only it could continue, if only it persisted ! Just think. The child is born and for some months he lies in his house. After a while he walks, goes around, does things and he enjoys himself, he is happy ; he lives from day to day and by doing this he learns movements ; language comes into his mind with all its constructions ; the possibility of directing his movements to suit his life and many other things. Whatever is in his environment comes to be part of his mind : habits, customs, religion. Think how wonderful it would be if, while merely enjoying ourselves, merely by existing, just because we had such a type of mind, we could become doctors or lawyers or engineers. Think of it. Children learn the language with all the perfection or imperfection they find in their environment without going to school. How wonderful would it be if one could learn German merely by walking with a German. Instead how hard have we to work. And how much have we to study when we have to learn the different subjects.

Little by little the child becomes conscious of all the things, these form his consciousness. And so we see the path followed by the child. He acquires all unconsciously, gradually passing from unconscious to conscious, following a path of pleasure and love.

This consciousness seems to us a great acquisition. To become conscious; to acquire a human mind! But we pay for it. Because as soon as we become conscious, every new acquisition causes hard work and fatigue.

Movement is another of these wonderful acquisitions. At birth the child moves very little, then gradually his body becomes animated. He starts to move. The movements that the child acquires, just as is the case with language, are not formed by chance. They are determined in the sense that they are acquired during a special period. When the child begins to move, his absorbent mind has already taken in the environment. Before he starts to move, an unconscious psychic development has already taken place. As he starts to move, he begins to become conscious. If you watch a small child of three, he is always playing with something. That means he is elaborating with his hands, putting into his consciousness, what his unconscious mind had taken in before. It is by this experience in the environment in the guise of playing that he goes over the things and the impressions that he has taken into his unconscious mind. It is by means of work that he becomes conscious and constructs Man. He is directed by a marvellously grand mysterious power which little by little he incarnates and thus he becomes a Man. He becomes a man by means of his hands, by means of his experience, first through play, then through work. The

hands are the instrument of the human intelligence. And by means of this experience he becomes a man, he takes a definite form and becomes limited because consciousness is always more limited than unconsciousness and sub-consciousness.

He comes to life and begins his mysterious work and little by little he becomes the wonderful personality adapted to his time and to his environment. He builds his mind, until little by little he has constructed memory ; until little by little he has constructed understanding, reasoning power ; until little by little, he has arrived at his 6th year. Then suddenly we educators discover that this individual understands, that he has the patience to listen to what we say, whereas before we had no power to reach him. He lived on another plane, different from ours. In this book we are concerned with this first period. And a study of the psychology of the child in the first years of his life is so marvellous, so full of miracles, that all who understand it cannot help but feel a great emotion. Our work is not to teach, but to help the absorbent mind in its work of development. How marvellous it would be if by our help, if by an intelligent treatment of the child, if by understanding the needs of his physical life and by feeding his intellect, we could prolong the period of functioning of the absorbent mind! What a service we should render if we could help the human individual to absorb knowledge without fatigue, if man could find himself full of knowledge without knowing how

he had acquired it, doing it almost by magic. And why should it not be possible ? Is not nature full of magic, full of miracles ?

The discovery of the fact that the child is endowed with an absorbent mind has brought about a revolution in education. Now it is easy to understand why the first is the most important amongst the periods of development. The creation of human character takes place within its span ; and once we have understood this, it also becomes clear that we must help the child in his creative work. For there is no age in which the child is more in need of intelligent help than in this period. It is evident that if the child meets with obstacles, his creative work becomes less perfect. We do not any longer help the child because he is a small and weak being. No ! We have realised that the child is endowed with great creative powers, that these great powers are delicate in their nature and can be thwarted if obstacles are placed in their path. It is these powers we wish to help, not the small child, not his weakness. When we understand that these powers belong to an unconscious mind which must become conscious by work and experience carried out in the environment, when we realise that the child's mind is different from ours, that we cannot reach it and teach him things, that we cannot directly intervene in this process of passing from the unconscious to the conscious and of constructing the human faculties ; then the whole conception of education will change and will

become that of a help to the child's life. Education will take the guise of an aid to the psychic development of man and not of making him memorise ideas and facts.

This is the new path of education and how to help this mind in its different processes, how to second the different powers and how to give strength to the different qualities of this mind will be the object of our study in this book.

CHAPTER IV

A NEW ORIENTATION

IN our days there is a definitely new orientation in biological studies. Previously all study was carried out on the adult being. For instance, when animals or plants were studied by scientists it was the adult specimen which came under consideration. This applied also to the studies upon humanity. It was always the adult that was taken into consideration, *e.g.* in the study of morality, in the study of sociology, it was always the adult. Another field which attracted the attention and meditation of the thinkers was death and this was logical because the adult being as he proceeds in life is headed towards death. The study of morality was, we might say, the study of the conditions and rules of social contact amongst adults. It is true that there are moral ideas such as love for one another, the sacrifice of one's self for the welfare of other beings and so forth, but all these are difficult virtues. They require a preparation and an effort of the will. Today scientists seem to have taken the opposite direction. It seems as

though they were proceeding backwards. Both in the study of human beings and of other types of life, they consider not only the very young beings, but their very origin. So biology directs its attention to embryology, to the life of the cell and so forth. From this orientation towards the origin a new philosophy has sprung up but this philosophy is not of an idealistic nature. Rather, we might say, it is scientific because it springs from observation and not from abstract deductions of thinkers. The progress of this philosophy proceeds side by side with the progress in the discoveries made in the laboratories.

When one enters the field of origins, the field of embryology, one sees things which do not exist in the fields that concern adults, or if they do exist, they are of a very different nature. Scientific observations reveal a type of life which is quite different from the one that humanity was accustomed to consider previously. It is by this new field of research that the personality of the child has been thrown into the limelight. A very banal consideration will show that the child does not progress towards death like the adult, the child progresses towards life because the purpose of the child is the construction of man in the fullness of his strength and in the fullness of his life. When the adult arrives, the child is no longer. So the whole life of the child is a progress towards perfection, a progress of ever greater achievement. Even from this banal observation, one can

deduct that the child can find joy in the fulfilment of a task of growth and perfection. The child's is a type of life in which work, the fulfilment of one's task, brings joy and happiness, whereas in the field of adult, work is something which is usually a rather painful process. This process of growth, this proceeding in life is for the child something that expands and enlarges, inasmuch as the older the child becomes, the more intelligent and stronger he becomes. His work, his activity help the child to acquire intelligence and strength, whereas in the case of adults, it is rather the contrary. Also in this field of the child, there is no competition, because no one can do the work that the child does in order to construct the man that he has to construct. In other words, nobody can grow for him.

The adults who are near the child usually are protectors of the child. So one can see that, in the case of human beings, it is in the field of the child that examples and inspiration for a better society can be found. It is not a question of an ideal. It is a reality. As this field is different and also as it represents a better kind of life, it deserves to be studied.

Now let us go still further back in the life of the child, *i.e.* to the period before birth. Already before birth the child has contact with the adult because as an embryo life is spent in the body of the mother. Before the embryo, there is the germinal cell which is the result of two cells which come from adults. So from either

side when one goes towards the origin of the life of human beings, and when one goes on following the child towards the completion of his task of growth, one finds the adult. The child's life is the line that joins the two generations of adult life. The child's life which originates and is originated, starts from the adult and finishes in the adult. This is the way, the path of life, and it is from this life that touches the adult so intimately that a great light can be derived. That is why its study is so fascinating.

The Two Lives

Nature furnishes special protection to the young. They are born amidst love, the very origin of the child is love. Once he is born, he is surrounded by the love of his father and mother. So it is not in strife that he is generated and that is his protection. Nature gives to the parents love for their young and this love is not something artificial, or enforced by reason, such as the idea of brotherhood that all people aspiring to unity are trying to arouse. It is in the field of the child's life that can be found the type of love which shows what ought to be the ideal moral attitude of the adult community, because only here can be found love that naturally inspires self-sacrifice. It inspires the dedication of an ego to somebody else, the dedication of one's self to the service of other beings. In the depth of their sentiment all parents give up their own life in order to dedicate it to

their children. This sacrifice that the father and mother make is something natural that gives joy. It does not appear as sacrifice. Nobody for instance says : " Oh, this poor man has two children etc." But one says : " How lucky this man is to have a wife and children. What a joy it must be for her to have such lovely children ! " And yet there is a real self-sacrifice on the part of the parents for their children, but it is a sacrifice which gives joy. It is life itself, so that the child inspires that which in the adult world represents an ideal : renunciation, self-sacrifice which are almost impossible to attain. What businessman, if, on the market, there is something rare he needs, tells another rival firm : " Here you take it, I do not want it ? " But if they are both hungry and if there is only a small piece of bread, what father or mother would not say to the child : " You eat it. I am not hungry ? " This is a very lofty sort of love that can be found only in the world of children. It is nature that gives it. So there are two different lives. The adult has the privilege of taking part in both. In one life because of the child and in the other because he is a member of society. The better of the two is the part which concerns the child because in this life his loftiest sentiments are developed.

Now it is curious that, if the study is carried out among animals instead of among men, these two types of life are also to be found. There are, for instance, the wild and ferocious animals which seem to change their

instincts when they have a family. Everybody knows how tender are tigers and lions for their young and how brave becomes the timid deer. It seems as if there were a reversal of instinct in all animals when they have young ones to protect. It is a sort of imposition of special instincts over the ordinary ones. Timid animals, even to a greater degree than we, possess an instinct of self-preservation, but when they have young ones, this instinct of self-preservation changes into an instinct of protection for the young. So with many birds. Their instinct for the protection of life is to fly away as soon as any danger approaches, but when they have young ones, they do not fly away, but some remain frozen upon the nest in order to cover the betraying whiteness of the eggs. Others feign being wounded, keep themselves just out of reach of the dog's jaws and attract them away from their young who remain in hiding. Ordinarily instead of taking the chance of being caught, they fly away. There are many instances of this kind and in every form of animal life there will be found two sets of instincts : one set for self-protection and another set of instincts for the protection of the lives of their young. One of the books which most beautifully describes this is a book of the French biologist J. H. Fabre in which he concludes by saying that it is to this great mother-instinct that the species owes its survival. This is true because if the survival of the species were due only to the so-called weapons for the struggle for existence, how could the young ones

defend themselves? They have not as yet developed these weapons. Are not the small tigers toothless and the young birds without feathers?

Therefore, if life is to be saved and if the species is to survive, it is necessary first of all to provide protection for the young who though unarmed are building up their weapons.

If life owed its survival only to the struggle of the strong, the species would perish. So the real reason, the main factor of the survival of the species, is the love that the adults feel for their young. If we study nature, the fascinating part is to see the revelation of intelligence that there is even in the lowest of the low, as we consider them. Each one is endowed with different kinds of protective instincts; each one is endowed with a different kind of intelligence and all this intelligence is expended for the protection of the young, whereas if one studies their instincts for self-protection, these do not show so much intelligence and there is not the same variety of instinct in this field. There is not the finesse of detail that made Fabre fill 16 volumes, treating mainly of the protective instincts among insects. So studying among all different kinds of life, one sees that two sets of instincts are necessary and two types of life. When we carry this to the field of human life, were it for nothing but for social reasons, the study of the life of the child is necessary for the consequences it has in the adult. And this study of life must go to the very origin.

Embryology

There are today different sciences which take into consideration the life of the child and the life of the living being from its very beginning. One of the most interesting is the study of embryology which is also carried out in a new fashion. Thinkers and philosophers in all times have wondered about the marvel of a being who did not exist before and becomes a man or a woman who will have intelligence, thoughts, and who will be able to show the greatness of his soul. How does this come about? How are the organs made which are so complicated and so marvellous? How are the eyes formed and the tongue, that allows us to speak, and the brain and all the other infinite details of the human organism? How are they formed? In the beginning of the XVIIIth century scientists thought that there must be in the egg-cell a minute ready-made man or woman. It was so small that one could not see it but it was there and afterwards it merely grew. This was thought to be so also for the mammals. Two schools disputed as to whether it was the man who had this in his generating cell or the woman. And they fought carrying on learned discussions in the Universities. At that time there was a young man who made use of the microscope, which had just been invented, saying to himself: "I am going to see what really happens." He started to study the germinal cell. He came by observations to the conclusion that there is nothing pre-existing.

He said that the being builds itself and described how it is formed. The germinal cell divides itself into two, the two divide into four and by multiplication of cells, the being is formed. (See fig. 1.) The learned university men who were fighting with each other became angry. Who is this ignorant person who says that nothing exists ? Why, this is against religion ! And the situation became so bad for this poor man that he was chased out of his country. He remained an exile and died in a foreign country. For 50 years though the microscopes were multiplied, nobody dared to look into the secret again. But meanwhile what this first man had said had begun to penetrate and people thought that it might be true. Another scientist after 50 years made the same study and found that what the first man had said was true. He said it to every one and this time every one believed it, and a new branch of science arose which today is very advanced : Embryology.

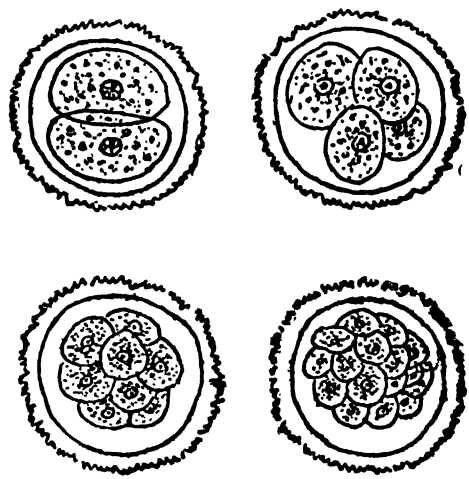


FIG. 1
The multiplication of the germinal cell.

Today embryology has developed to the point that it begins to reason and says that it is true

that there is nothing pre-existing, that there is no ready-made man or ready-made woman who grows and grows until he becomes a full-grown man or woman ; but there is a pre-established plan of construction which is surprising, because it seems so well made, so well reasoned out, that it appears as if somebody had thought it out and fixed it. It is as though some one wanted to build a house and started by collecting bricks before beginning to build the walls of the house. And the same happens with this primitive cell : first it accumulates a number of cells, by sub-division and multiplication, and then builds three walls. When the three walls have been built, the second phase begins—the phase of the construction of the organs.

Now the construction of the organs takes place in an extraordinary way. It begins by one cell at one point. I do not know what happens there. I do not know if it is something of a chemical nature or if it is a sort of sensitiveness. I believe no one does. The fact is that around that point an extraordinary activity begins. There the rate of multiplication of cells becomes feverish whereas elsewhere it continues in the same calm fashion. When this feverish activity ceases, an organ has been built. There are several of these points and each one of them builds up a definite organ. The discoverer has interpreted the phenomenon in this fashion : there are points of sensitivity around which a construction takes place. These organs develop independently one from the other. It is

as though the purpose of each of these cellular points were to build something for themselves only, and the intensity, the activity, is such that in each of these organs the cells become so united, so imbued with what we might call their ideal that they actually transform themselves and they become different from the other cells. So the cells assume a special form according to the organs that they are constructing. Then when the different organs are formed independently one of the other, something else comes, which puts them into relation and communication. When they are all united, so united and so interconnected that one cannot live without the other, the child is born. It is the circulatory system that joins them together. And after the circulatory system, the nervous system is finished, to make more intimate the union. And then one sees the plan of construction. This plan of construction is based upon a point of enthusiasm from which a creation is achieved. And once the creation of the organs is a fact, they are destined to unite, to join together. This plan is the same for all superior animals and for man. It is followed by them all for the development of each.

The modern idea is therefore that there is but one plan of construction common to all lives. Embryos are in fact so similar that in the recent past there was a theory that evolution had proceeded along a path of different degrees of animality; so that man for instance came from the monkey, that mammals and birds came from

reptiles, these from amphibians, the latter from fishes etc. The embryos of each were thought to pass through the stages of all the preceding ones before achieving birth ; so that in the embryos there was a synthesis of the evolution of the species. Today this is an abandoned theory. Today science looks merely at the facts and says that nature has but one method of construction, that there is only one plan of construction in nature.

Now if we have this in mind, then many obscure facts are better understood, *e.g.* the psychic development of the child, because not only the human body, but also the human psyche is constructed following the same plan. It starts from nothing, or at least from what appears to be nothing, in the same way as the body starts from that primitive cell which appears in no way different from other cells. In the new-born child, also psychically speaking, there seems to be nothing which is already built up, just as there was not a ready-made man in the primitive cell. And in the psychic field also, organs are built around a point of sensitivity. There is at first the work of accumulation of material, just as we said there was an accumulation of cells by a multiplication in the case of the body. This is done by what I have called the ' absorbent mind.' After that come points of sensitivity. These are so intense that we adults cannot even imagine anything approaching it. We gave an example of this when we illustrated the acquisition of

language. From these points of sensitivity, it is not the psyche that is developed, but the organs of this psyche. Here also each organ develops independently of the other, *e.g.*, language, being able to judge distances, or being able to orient oneself in the environment, or being able to stand on two legs and other co-ordinations. Each of these items develops around an interest, but independently one of the other. Now this point of sensitivity is so acute that it attracts the individual towards a certain set of actions. None of these sensitivities occupies the whole period of development. Each occupies only part of the time ; long enough to ensure the construction of a psychic organ. After the organ has been formed, the sensitivity disappears, but during this period there are powers so great that we cannot imagine them, because we have lost them and therefore cannot even have an idea of what they are. When all the organs are ready, they unite, in order to form what we call the psychic unity.

Biological studies carried out upon different animals have revealed that all of them build their adult species by means of these sensitive periods. One cannot understand the construction of the psyche of the child, unless one has an idea of these sensitive periods. When one knows of them, then the whole attitude towards childhood is bound to change. As a consequence we are better able to help the psychic development of the child if we know when these sensitive periods occur.

People say: "What about the previous generations? How did they develop into healthy and strong beings if they did not know about them?" It is true that humanity did not scientifically know the sensitive periods, but in previous civilizations mothers applied an instinctive treatment of their children which enabled them if not to second the needs of a sensitive period at least not to disturb it too much. Nature which in its plan has devised the sensitive periods so as to achieve the construction of the psychic organs has also put an instinct in mothers that guides them to give protection. And when one studies the simply living mothers in the treatment of their children, then one understands how well mothers of past generations must have aided the development of their children and how well they seconded the special sensitivities. It is in the sentiments that nature has put in the hearts of parents that the reason is to be found for the spiritual strength of previous generations.

Today, on account of civilization, mothers have lost this instinct. Humanity is headed towards degeneration. That is why it is as important to study the maternal instinct as it is to study the phases of the natural development of children. In the past the mother not only gave physical life, not only the first nourishment, but she also gave protection to growth as other mothers belonging to animal species give it even today. And if today in humanity the maternal instincts tend to disappear as they

do, then a very real danger looms ahead of humanity. Today, we are face to face with the great practical problem that mothers must co-operate and science must find some way of aiding and protecting the psychic development of the child as it has found a way of protecting the physical development. The artificial life of the West has deprived most children of their mother's milk and the children would have starved if science had not intervened and supplied the child with some other sort of physical nourishment. In the psychic field, maternal love is a force, it is one of the forces of nature. This must receive today the attention of science, science must enlighten the mothers by means of the discoveries made in the field of the psyche of the children so that henceforth mothers can help consciously instead of unconsciously. Now that circumstances no longer give free play to instincts in the mother, a consciousness of the child's needs must be given to her. Education must come to the rescue and give mothers this knowledge. Education that starts from birth means to give a conscious protection to the psychic needs of the children. It is certain that in this effort to give protection to the psychic needs of the children, the mothers must be the first to be invited and interested. And if the life of today has become so artificial that the child cannot achieve its development, then society must create institutions which will fulfil the needs of the children. When should schools begin ? We started from $3\frac{1}{2}$, then we went to 3, then $2\frac{1}{2}$,

then 2. Now the children of one year are brought to school. But education meant to give protection to life, must reach further down until it includes the new-born child.

CHAPTER V

THE MIRACLE OF CREATION

THIS passing from a cell to a complete organ is something which is incomprehensible, but it is a fact. It does exist, but it is so marvellous that no one can understand it and if one reads the modern scientific books upon this subject, one finds a word used which before was anathema to scientists. It is the word 'miracle'. Because though it is something that happens continuously, nevertheless it is miraculous and wonder at this miracle is felt just the same. No matter what animals are observed, a bird or a rabbit or any sort of vertebrate, one sees that it is composed of organs which in themselves are extremely complicated and what causes great wonder and surprise is to see how these very complicated organs are closely connected one with the other. If one considers the circulatory system, one sees in it a drainage system so fine, so complicated and so complete that no system of drainage invented by the most advanced type of civilization can be compared to it. Also the intelligence service of collecting impressions from the environment, which is carried out with sense organs, is so

marvellous that no modern instrument can approach it. What can for instance approach the marvel of the eye, or of the ear? And if one studies the chemical reactions that take place in the body, one sees that there are special chemical laboratories in which substances are evolved, placing and holding together other substances that we in our most modern and most powerful laboratories are unable to unite. If we consider communications in the human system, the most evolved and perfect communication systems—which include telephone and wireless, telegraphy and telephones and all that we may imagine which have been evolved and put together—they, when compared to the communications that there are in the body by means of the nervous system, are as nothing. And if one studies the best organised army, one will never find the obedience that the muscles have, which carry out the commands of one strategic director whom everyone obeys immediately. These obedient servants exercise themselves in a special work, in a special fashion, so as to be ready to obey whatever commands come to them. If we consider that all these complicated organs, organs of communication, muscles obedient as soldiers, nerves that penetrate each little cell in the body, come from one cell,—the primitive cell which is spherical in its form,—we realise the wonder of nature. Each living animal, each living mammal, and man, this marvellous being, all of them come from one primitive cell which, when examined, differs in no way from other cells and

looks very very simple. If we, who are accustomed to big things, consider the size of these primitive cells, we shall probably receive a shock. It is the 1/30th part of an inch, or 1/10th of a millimetre. To realise what this means, consider the size of a point made by a sharp pencil and try to put 10 such dots one against the other, no matter how tiny they are a millimetre will not hold ten of them. So imagine how microscopic is the cell, this cell from which man comes. And when this cell develops, it develops isolated from the parent because it is protected, it is enclosed in a sort of envelope that keeps it separate from the adult that contains it. This is true for all animals. The cell is isolated from the parent so that the adult resulting from it is actually the product of the work of this cell originated by the adult. This has been the cause of meditation for a long time because the greatest men in different spheres, such as Napoleon or Alexander or Gandhi, Shakespeare or Dante, etc., as well as the humblest of the humble among the human beings, every one has been constructed by one of these tiny cells. This mystery not only provoked meditation but has also roused the attention of many scientists who have made these cells the object of their studies. By observation with a powerful microscope, it has been found that each cell contains a certain number of points which as they can be very easily coloured by chemical means have been called ' Chromosomes.' Their number differs in the different species. In the human species for instance,

there are 48. In others there are 15, in some 13 so that the number of chromosomes distinguishes the species to which they belong. Scientists thought that these chromosomes had something to do with the formation of the organs. Recently much more powerful microscopes have been invented. These allow one to see things which it was absolutely impossible to see previously. They have been called ultra-microscopes, and by their means people have been able to see that each of the chromosomes was a sort of a little box which contained a sort of chain, composed of about 100 little grains. The chromosomes break up, the grains free themselves and the cell becomes the depositary of some four thousand little grains that have been termed 'genes' (fig. 2.) The word genes

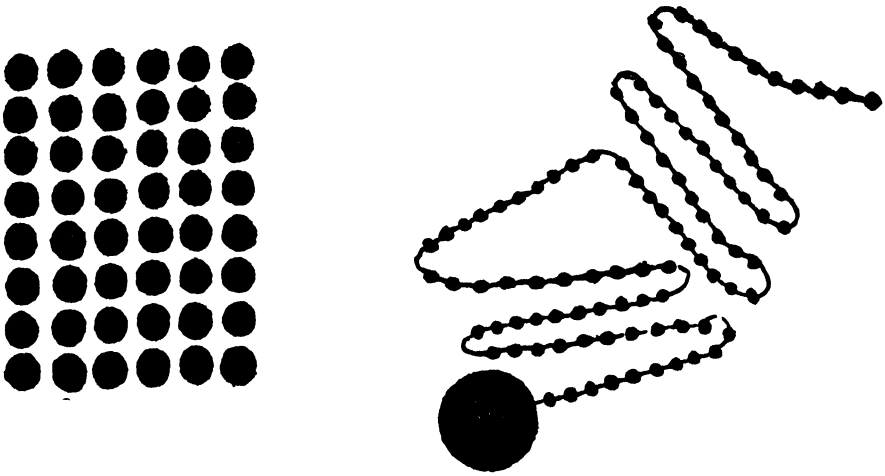


FIG. 2
A chain of 100 genes shown linearly and each contained in one of the 48 chromosomes disposed geometrically on the left.

implies the idea of generation. They have been so called because the characteristics of the body are formed by their combinations.

This is really science. Yet if one stops to think what this implies, one realises how mystic this dry scientific statement sounds, for this cell is so tiny as to be almost invisible, yet it contains within itself the heredity of all times. In this little speck, there is the whole experience, the whole history of the human kind. Before any apparent change is visible in the primitive cell, already a combination among these genes has taken place. They have already arranged themselves to determine exactly the form of the nose, the colour of the eyes etc. of the being that will result from this primitive cell. Not all the genes are employed in the formation of a body. A sort of struggle takes place between these genes ; only a few combine and these give the outer characters of the individual while others remain hidden and obscure. For instance, there is the famous example of Mendel who made an experiment. He crossed a plant with red flowers and one of the same kind with white flowers and then the seeds of the new plant were sown. These produce either three plants with white and one with red flowers or the contrary. So out of 40 seeds, 30 will come with red flowers and 10 with white flowers or 10 with red and 30 with white. If the circumstances are good, it is the superior qualities that prevail ; but if the circumstances are not favourable, then it is the worse qualities

that come forth. So according to the circumstances in which the cell finds itself, you can have a more beautiful individual or a less beautiful individual, a stronger individual or a weaker individual. And this is due to the combinations between the genes. The combinations are so many that every human being is different from every other and even if one observes families that have many children, though all the children are generated by the same parents, yet some are beautiful, others ugly ; some are tall, others short and so forth.

Today much time is spent in studying what are the circumstances which will make the better characters come forth ; a new science has arisen, Eugenics, which shows how man has by his intelligence succeeded in acquiring influence even over heredity. Human intelligence has understood that heredity can be influenced only at the stage when the primitive cell is formed and changes can be made. Thus man becomes a sort of god who takes in hand the powers of life and orients the path it will take. Nothing much has been done in this direction in the field of humanity, but in that of plants and animals, man has been able to influence heredity to a great extent. What does it mean when one has the power of life in one's hand ? It means that we can dispose of heredity so as to transform the species. This is the fascinating part that in our days focusses on this science the interest of hundreds upon hundreds of people. Today this interest is not academic or philosophical. Today it has invaded

the practical field. Great numbers of plants and animals have been transformed. Some years ago, for instance, two young men carried out certain biological experiments and a race of stingless bees was produced which made a great deal more honey. So man has been able to influence the life of these insects and to create a species that has become harmless and produces more of a nourishing substance that humanity appreciates. In the same way certain plants have been transformed so as to produce much more food than they did previously. Men have also transformed simple roses into the many beautiful varieties that today gladden our eyes and delight our sense of smell. In the case of flowers great achievements have been made. Man has captured a secret of life. He has become a sort of magician who has embellished life with the magic wand of his intelligence ; because of it, the world is much richer and more pleasant. We begin to see one of the aims of the life of man, one of the reasons which makes him one of the great cosmic forces. He has not been placed in the world in order to enjoy beautiful things. He has been placed here to make the world better. Man has intelligence because he has to make a better world than that which he has found. It is as though man were the continuator of the creation, as though he had been sent to employ his intelligence in order to help and make creation more perfect. Intelligence is the great gift that has been given to him. Man has been able to enter a

field that permits him to have control over life. Hitherto man had to follow life as it was, but now he can control it. So the study of embryology is no longer an abstract and fruitless study. It is a study which has allowed man to penetrate certain secrets of life and to be able to control by means of these secrets the beings that are to come. Now, if by a stretch of imagination we think that psychic development follows a similar procedure, then we can imagine that man, who has penetrated the secrets of physical development, can also control and help psychic development.

This chapter about genes and heredity is separate from pure embryology. Embryology considers only the way in which the primitive cell produces the individual. To do this, the ultra-microscope or special reasoning are not required. It is merely a question of observation. From one cell, two are generated and these remain joined. Then the two become four, the four eight, eight become sixteen and so on. This continues until hundreds of cells are produced which are similar to the bricks that are used for the construction of a house. Eventually a sort of hollow sphere is produced. Curiously enough, in the oceans, there are certain animals which are just like that, a hollow ball, and they are called 'volvo' because they are always going round. Then these balls become inflected and form two walls and later a third wall is formed between the two. So the first construction consists of these three walls. Up to now all cells are

alike amongst themselves. Only they are smaller than the primitive cell. (Fig. 3.)

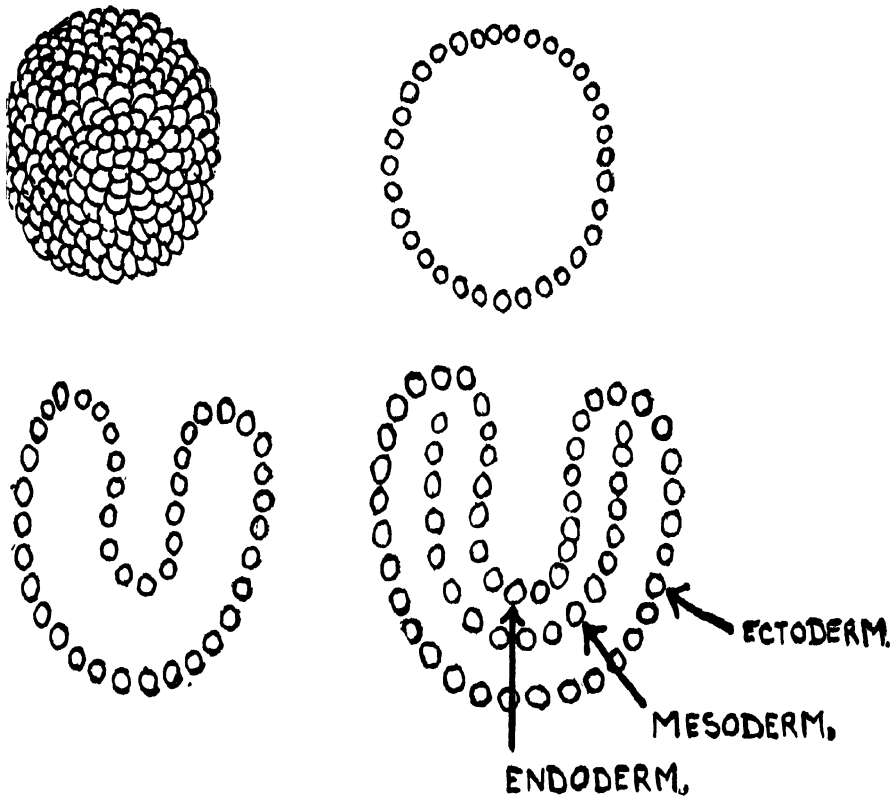


FIG. 3

Upper left the primitive ball of cells (morula) consisting of a single wall (right). Below left the introflected double-walled gastrula and to the right the third inner wall is formed.

Recently studies have permitted the discovery of the way in which these organs are formed. I mentioned this fact in the previous chapter. This discovery was

made very recently, between 1929 and 1930 *i.e.*, after the first world war. Now this is 14 years ago. Before a discovery is made and this discovery is made public and every one knows about it, 14 years are, we might say, as yesterday. Now the figure reproduced here does not correspond to a reality. (Fig. 4.)

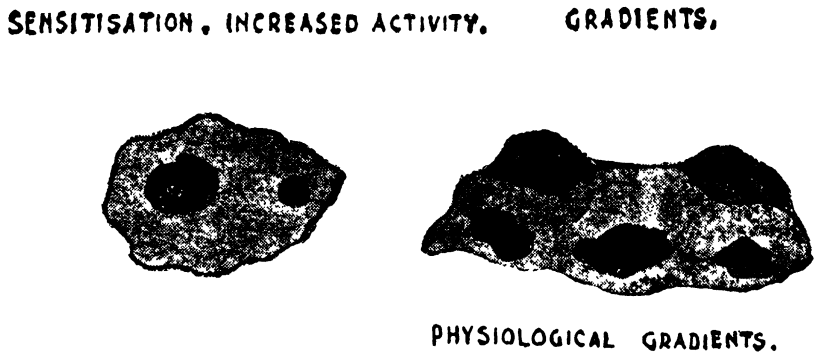


FIG. 4

It is something imaginary made in order to show points of sensitivity. There are these spots in which cells begin to multiply very fast and it is in these special points that organs are formed. While one person discovered this in America, in England independently somebody else was also doing research work and he made the same discovery. The American called these points 'gradients', the Englishman, as he made his discovery upon the nervous system, called them 'points of sensitisation' and 'sanglion'.

Each of the three walls of the gastrula produces a set of organs. The external one produces the skin, the

sensory organs and nervous system. And this illustrates that the external layer is in relation with the environment, because the skin gives us protection and the nervous system places us in relation to the environment. The innermost one develops organs used for nourishment such as the intestines, stomach, the glands of digestion, liver, pancreas, and the lungs. The organs of the nervous systems are called organs of relation because they allow us to put ourselves in relation with the environment. The organs of the digestive and respiratory systems are called vegetative organs because they make vegetative life possible. The third or middle wall produces all the rest, the skeleton that sustains the whole body and the muscles. Now it is curious to see how each one of these walls has a special purpose and this purpose remains the same for each kind of animal. As long as they are in the stage of walls, the cells are more or less alike, simple. Is this not intelligent? First three walls are made, then the organs. And is it not curious that the plan of the whole is made while each of the three layers is still independent of the other? After this, each of the cells that are going to form organs begins to transform itself. They assume the form best suited to perform a function which, however, they do not carry out in the embryo. So that this fine specialization of the cells which transform themselves for a certain function takes place before the function begins.

Here I have reproduced some of these cells (Fig. 5.).

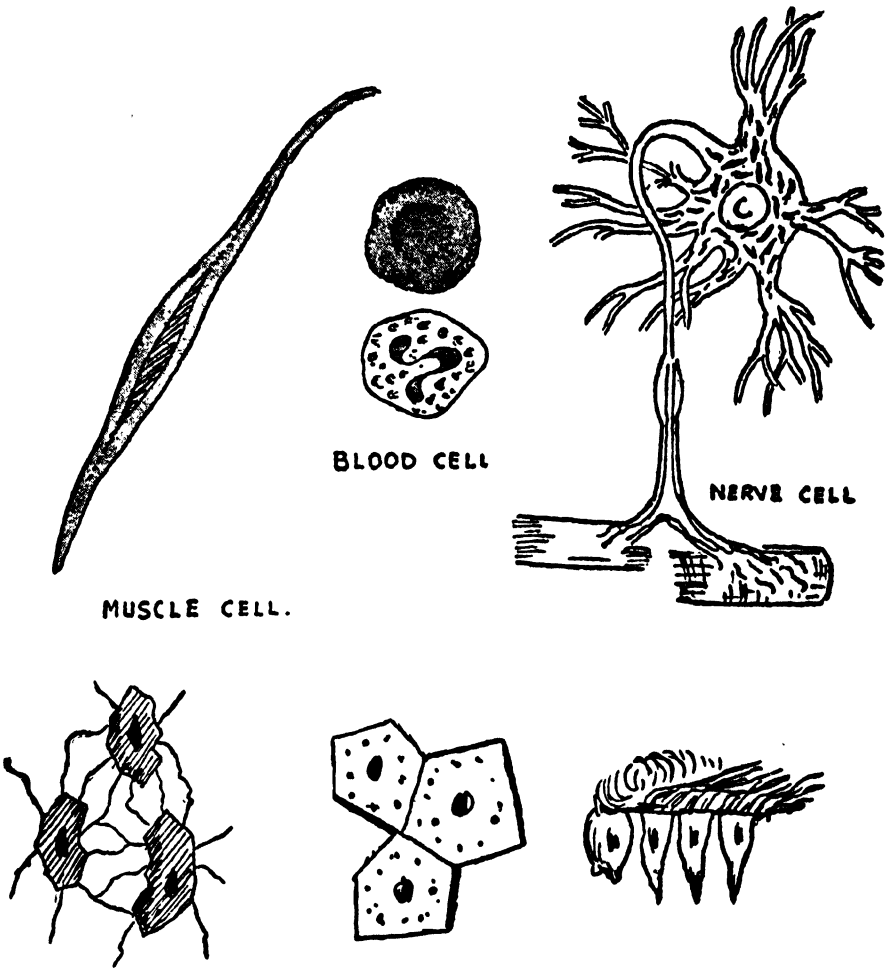


FIG. 5
Types of cells

There are the liver cells which are pentagonal in form ; there are the cells of the muscles which are very long, and the triangular ones are those that make the bones.

While these bone-cells are very soft, they take carbonate of calcium from the blood and form bones. There are others which are very interesting because they are a sort of little cup and these little cups exude a sort of sticky substance. They also have a sort of fringe of fibres called cilia which vibrate so as to catch any dust that may enter the throat with their gluey mucus and move it up to the mouth. And then there are the heroes, who sacrifice their life for the welfare of others. These are the cells of the skin. The skin which sacrifices itself for the protection of the other organs, covers the whole body. The outer layer of the skin dies ; its cells sacrifice themselves and underneath there is another layer which is getting ready to sacrifice its life for the safety of all. Those with the long filaments are the cells of the nervous system. Then there are the red cells of the blood which go on continuously taking oxygen to the other cells. They take back and throw away the poisonous gases that have formed. The marvellous thing is that though the red corpuscles of the blood are in enormous numbers, yet their number is determined.

Before the work starts, these are some of the types of cells. Each of these cells prepares itself for the work it has to do. When they have formed themselves for this special work, they can no longer transform themselves. A nervous cell can never be transformed into a liver cell. And so when they have transformed themselves as if imbued with a great ideal and dedicated

themselves to the work that fulfils it, their task is fixed, because they have specialized themselves for it. Is it not the same in our human society ? There are, we might say, special groups of men who form the organs of humanity. In the beginning each individual performs many tasks. In the primitive society, when people are few, one has to know a little of everything. One is a mason, a doctor, a carpenter and everything. But when society is evolved, then there is specialization of work. Each man chooses a type of work and his psyche becomes so involved in this work that he can do only that work and nothing else. For example, a doctor cannot be a shoemaker. The training for a profession is not only learning a technique, the individual undergoes a psychic transformation for the task that he is to perform so that one prepares himself not only technically, but, what is more important, one acquires a special psychic personality, which is suited for that special work. One finds one's ideal realized in it. One's life is that.

The same seems to happen in the case of the body. When each cell has specialized to form the different organs, something else comes that achieves a union among them all. It is composed of two complex organs which do not function for themselves but function in order to achieve the unity among all others. They are the circulatory and nervous systems. The first system is a sort of a river in which there are substances and these are carried to all. But it is not only a distributor, it is

also a collector. The organs produce certain things which are needed by other organs that are far away from them. See what perfection has been achieved by this river ! Each organ takes from it what it needs for its life and throws into the river whatever it has produced so that other organs can take of it according to their need.

Do we not find the same in our society to day ? Has it not developed a circulatory system. All the substances that are produced are thrown into circulation and each one takes from it what is useful for his life and what is produced is thrown into the stream of commerce so that it becomes available to others. The merchants, the travelling salesmen who go about everywhere, are they not like red corpuscles ? If we look at human society, we can better understand the functioning of the embryo because in society also the functioning is such that things produced in Germany are consumed in S. America, things which are produced in England are consumed in India and so forth. We can deduce from this that society has reached an embryonic stage in which the circulatory system begins to function, but with many defects still. The defects of circulation reveal that our society has not finished its development.

The one thing we do not find in human society is something corresponding to the specialized cell of the nervous system. We might almost conclude that this organ of direction has not yet been envolved by society as the the chaotic state of our world very clearly indicates. In

the absence of this specialization, there is nothing that gives sensibility to all and can harmoniously direct the whole of society. What happens in democracy, for instance, which is the most evolved sort of social organization that civilization has produced? It permits all to choose their own leader by elections. If we transport this to the field of embryology, one could say: "I think the liver cell is most suited to govern"; and another:" "I think that those cells which are inside the bones are more suited, because they have a strong structure." And another might say: "I want some one heroic who will defend us. The skin cell must be at the work of direction". If such a situation arose in the field of embryology, it would appear absurd, inconceivable, because if there must be specialized cells at all it is surely the cell which directs the functions of the whole. The work of direction is the most difficult task and requires greater specialization than any other. So it is not a question of election. It is a question of being fit and prepared for the work. He who has to direct others, must have transformed himself. Thus there can be no leader unless he has first transformed himself. But this principle that goes from specialization to function is fascinating. It becomes even much more fascinating when we discover that this is the plan adopted by nature for all branches of life, that it is the plan that nature follows when it creates.

If we show an interest in embryology, it is not only because of this plan, and because of the fact that one can acquire control over development, but because it runs parallel step by step to what we have discovered in the psychic field.

CHAPTER V

ONE PLAN, ONE METHOD

NEITHER the discoveries nor the theories that arise from modern discoveries explain fully the mystery of life and of its development. But certainly they do show and illustrate facts. These furnish us with sufficient data to enable us to see how growth takes place. Every new detail discovered shows an added realization, but does not explain it. These phenomena can be fully observed and they give an explanation of events of ordinary life. One of the things which is observed for instance is that the plan of construction is only one and all types of animal life follow it. Now when I say that it is a plan, I do not mean that we actually see a plan drawn up like a draftsman's. But what we see occurring in front of our eyes, shows us that all the details follow a certain invisible plan. The plan can be seen materially in the embryo, it can be followed in the psychology of children and it can also be recognized in society. If one observes the embryos of different animals, one easily sees that the plan of development followed is the

same. This is no new discovery. Fig. 6. shows the embryos of three different animals at two different

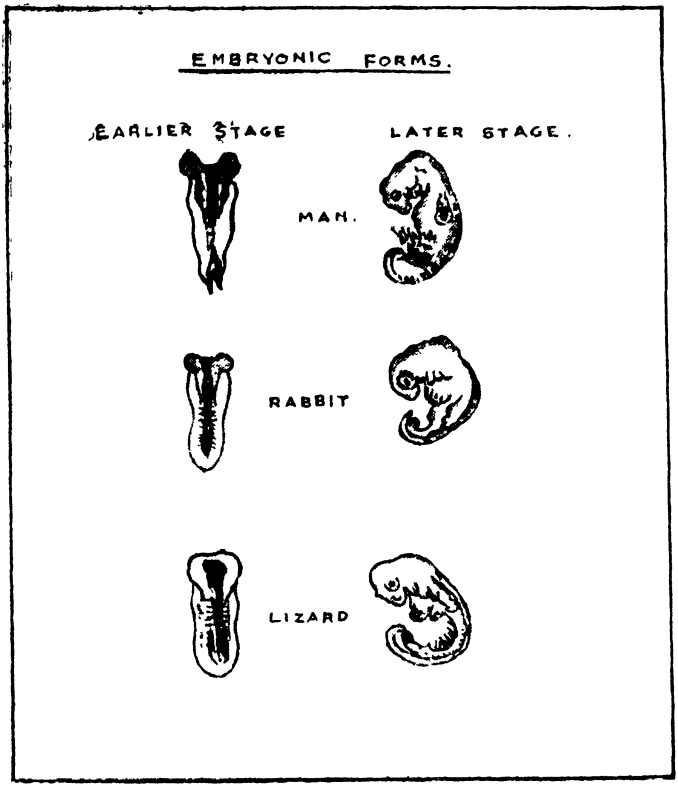


FIG. 6

stages. The earlier stage is on the left and the more advanced on the right. The animals are: Man on top, rabbit below it, and lizard below that. And this is one of the revelations I mentioned. As the picture shows, in order to realize themselves, the vertebrates have to pass through the same stages of development and the same forms. For instance you can see

a striking resemblance between man and lizard at this stage of embryonic development. Yet when the embryo has finished developing, the difference is immense. So there is a period when all beings are alike.

We can also say with the same certainty that, psychically speaking, there is a period in which all the human beings are alike. And when we say that the new born is a psychic embryo, we must understand that all new-born children are alike. There can therefore be but one means of treating or educating children of this age, *i.e.*, if education is to start from birth, there can be but one method. There can be no question of special methods for Indian children or Chinese or Japanese or European children. Here there is an absolute method which is the same for all. There is a period of incarnation in which every human being acts in the same fashion, *i.e.*, every human being incarnates itself in the same way ; all have the same psychic needs and follow the same procedure in order to achieve the construction of man. No matter what type of man results from the work of the child, no matter if it is a genius, or a labourer, a saint or a murderer, each in order to become what he is in the end, must pass through these stages of growth, these phases of incarnation. What we must take into consideration is this process of incarnation, we must not pre-occupy ourselves with what the individual will become later on. We cannot interfere with that. First of all we do not know it, and then we should not have the power

to achieve it if we knew. What must preoccupy us, what must take our energies is the assistance to those laws of growth that are common to all.

This brings us to the question of the methods of education. There must be—there can be—only one method of education. The method which helps the natural laws of growth and of development, alike for all. This is not an idea ; it is a fact, an evident fact and it shows that it cannot be a philosopher or a thinker to dictate this or that method of education. The only one who can dictate the method is nature itself which has established certain laws, which has infused certain needs into the growing being. It is the aim of satisfying these needs, seconding these laws, which must dictate the method of education ; not the more or less brilliant ideas of a philosopher.

This is specially so in the first years of life. It is true that afterwards differences arise in the individuals but it is not we who cause these differences ; we cannot even provoke them. There is an inner individuality, an ego which develops spontaneously, independently of us and we cannot do anything about it. We cannot make, for instance, a genius, or a general or an artist. We can only help that individual who is to be a general or a leader to realize his potentialities. No matter what they are, if they are leaders or poets or artists or geniuses, or merely common men, they must pass through these stages : embryonic stages before birth, psycho-embryonic stages after birth, in order to realize their mysterious future self.

What we can do is merely to remove the obstacles so that the mysterious being that each individual is to realize can be achieved, because by removing those obstacles, the work can be done better.

We call this fundamental effort of self-realization 'incarnation'. This is the first practical point : there is a process of incarnation, this process of incarnation is the same for all, and our aim in education must be to help this process of incarnation.

Further Outcome of Embryology

The three embryos of fig. 6 are very similar, one to the other. However, when they have finished their development, these beings are very different from one another. Now let us continue to illustrate this question of the development of embryos by following the reasoning of the most modern thinkers. What we have already seen is very striking : the existence of genes, the existence of points of sensitivity around which organs are formed and then the formation of two systems—the circulatory system and the nervous system which connect and unite intimately all that has been created. After these organs have come into relation, there is something that is even more mysterious. This is the fact that it is not merely organs that are created and that come to be intimately connected one with the other, but that there come living beings free and independent. It is not merely the construction of those organs and putting them in connection

with one another, the whole of these organs, the same in every being, form in each case a being different from the other : each has its own *character.* This is what is extraordinary. This problem has not yet been solved by science. There is the theory of evolution, but it is a theory and not a fact. Observation unfolds all the facts without explaining them. Whenever there is no explanation a void remains and this is important. The important fact is to recognise that there is a void. If we accept a theory, *e.g.*, that of evolution which covers all the facts, then our intelligence is set at rest. But once the void has been noticed, the intelligence becomes restless and sets out to find an explanation. These voids lead people to think, to study facts until a new discovery is made and with each discovery, one more void is filled and one step forward in knowledge is made.

There was a discovery first made public in 1930 (this seems to be an important year for embryology). It was made in the laboratories of a biologist of Philadelphia. These modern laboratories of America are very well staffed and endowed so that each scientist can dedicate himself to the study of one special detail. One of these studied for seven or eight years but one type of animal, a very inferior sort of amphibian and he studied it for such a long time because the facts did not correspond to the scientific theories which were expounded at the time. Now to give a full explanation of what this man has discovered would be boring and not easy

to understand. I just mention it in passing. This scientist discovered that the parts which were first formed were those parts which directed the functioning of the individual and that the formation of the executive organs comes afterwards. Every body knows that we have a nervous system and among other things we have a brain and in our brain are located certain parts each of which deals with an organ. There is a part of the brain which deals with sight and it is called the visual centre. Now what this scientist discovered was that the part of the nervous system which was meant to direct sight was formed first, much before the nerve of sight and much before the eye. This was absolutely contrary to the scientific theory of the time. The conclusion he came to was this: that in animals the psychic part is formed before the being itself is formed *i.e.*, the instincts of the animals are there before the animal has finished building itself physically. This means that generation concerns not only the body, and the different inner organs but also the psyche, also the instincts of each animal, and that the habits of these animals are fixed before the organ is formed.

Behaviourism

This is the new idea. The habits that the animal is going to have are fixed in the nerve centres much before the organ is built. Now if this psychic part is pre-existing, what does it mean? It means that the organ

finishes its own construction, moulding itself to the requirements of the psyche, of the instincts. This method of reasoning brings us to the conclusion that animals have their habits pre-established before birth and the organs are built in such a fashion as best to fulfil these habits and these instincts. So according to this new theory, what is important in nature is the habits, the customs of animals. It is interesting to see that the organs, of whatever the animal, are the best suited to carry out the command of its instincts. The new theory has arisen from years and years of study and from observation of facts, not from pre-established ideas. This brings us to the conclusion that the habits of animals are now-a-days more important than the form of the body which was the centre of interest in previous times. The term used in this generalization of facts is what is designated as 'behaviour'. It includes in its meaning the habits and customs of the animals described. The new theory is known in modern books, especially in America, as 'behaviourism.' It is a new light that has come into the field of science. The old ideas which held that animals assume their habits because they had to adapt themselves to their environment have gone. The old theory held that it was the will of the adult which provoked the transformations necessary so that the body became adapted to the environment, that the efforts which animals made to keep alive, this 'instinct of self-preservation', caused a transformation in the successive generations and gradually the

species became adapted. The species which could not do this perished. This was called the 'survival of the fittest'. This theory averred that by means of continuous efforts carried out during generations, a sort of perfection came about and this was then transmitted to the next generation.

The new theory does not do away with all this, but places the behaviour of the animal at the centre of all its habits. The facts observed are that the animal which strives for adaptation is successful only if its efforts are expended within its behaviour-pattern. So the animal which successfully carries out its experiences of life upon the environment does so along the lines of its behaviour. Let us illustrate this by an example. Let us take the cows. They are powerful animals, strong and well armed. In the geological history of the earth, the course of their evolution can be traced. They make their appearance when the earth is already well covered with vegetation. One might ask oneself why this animal has limited itself to feed only on grass which is the most indigestible food that can be found, so much so that in order to digest it the poor animal has had to develop four stomachs. If, as the old theory said, it was a question of self-preservation, of survival, how much easier it would have been to eat something else of which there was an abundance in the surroundings. It would have been very simple and very easy. But today after millions and millions of years, we still see cows, when in natural surroundings, eating

only grass. They stand with lowered heads, chewing and chewing. It is very seldom that you can make them raise their heads so that one can look into their beautiful eyes. Immediately after they have given you a look, down goes their head. If you observe the animal, you will see that it crops the grass near the roots, but it never uproots the plant. It seems to know that in order to keep the grass alive, it must be cut near the roots because if the latter are cut, the plant dies, whereas if they are cut like this, they develop under ground. The roots expand and occupy more ground and so the grass travels and spreads instead of dying. Now if one studies the history of evolution, one finds that only very late in the history of the earth grass appears and one also finds the tremendous importance that grass has for other vegetation ; because grass ties together the loose grains of sand which otherwise would be carried away by the wind. Not only does it render the ground firm, but it fertilizes it also. No other vegetation could have grown if the grass had not prepared the way first. That is the importance of grass. Two things are necessary for its upkeep, besides cutting : one is manure, the other is rolling *i.e.*, putting a heavy weight upon it. Now, tell me what artificial agricultural machine can be more marvellously fit for these three tasks than the cow herself. So efficient is this machine that besides helping the growth of grass it also produces milk. What a wonderful agriculturist of nature is the cow. Her behaviour gives us one more reason to be grateful to her.

We thought that she gave us milk and manure and nothing else. At the most we may have thought that the cow is an example of patience. But much more does humanity owe to the cow. It is something which has been ignored by humanity at large, but which has been felt by the subconscious mind in India, where the cow is worshipped. It is the upkeep of the earth, the life of other plants that we owe to the cow. The patience she has is more than the superficial patience that we admire. It is the patience of generations and generations.

A Task in Life

Now, if the cow were conscious, she would be conscious merely of the fact that she is hungry, that she likes grass, just as in India the people like chapatis, rice and curry and other people like something else. But certainly the cow will never realize, will never think, will never be conscious of the fact that she is an agriculturist. Yet the behaviour of the cow is just such as to help nature in its work of agriculture.

Now, let us take the example of crows and vultures who eat the refuse of nature. Why, with the abundance of food there is in the world, should the vultures eat rotten carcases and the crows excrements and whatever dirt they find in the environment? They have wings. They can and do fly long distances in search of their food. So it would not be difficuft for them to find something

more appetizing, such as other animals less endowed with strength and the possibility of movement do find. But can you imagine the amount of mortality there would be if this refuse were not removed from the earth? What an amount of illness, of plague and other diseases of all kinds would there be, if there were not some instrument whose only task in life is to keep the environment clean? They have by nature been allotted the task of cleaning the environment. Tell me what is the difference between the mass of workers that in Ahmedabad go back after their work, streaming from the mills towards their homes, and the hundreds of crows we see flying back at dusk towards their roost, after having done their work of cleaning and sweeping? This is their behaviour.

These two examples have been given taking them from the choice of food. We might take hundreds and we should find that each species has chosen a particular kind of food. We might conclude that animals have no free choice of food. They do not eat merely to satisfy themselves. They eat to fulfil a mission upon the earth, the mission which is prescribed for them by their behaviour. Certain it is that all these animals are benefactors of nature and the benefactors of all other living beings. They work to preserve the harmony of creation. They work out creation, because creation is achieved by the collaboration of all the living and non-living beings. And these two do their part in it by their behaviour. Other animals there are which eat in such tremendous quantity

that it cannot be explained merely on the ground of the upkeep of life. They do not eat in order to keep themselves alive. They keep alive in order to eat, for instance, the earth-worms. They eat only earth, although there is so much choice of foods. These earthworms eat daily a quantity of food which is 200 times the volume of their body. This is measured by their droppings. This is a species of being that does not eat in order to keep alive, especially when one considers the amount of other better food there is at its disposal. The worm is a worker of the earth. It was Darwin himself who first said that without the worms the earth would be less productive. The worms render the earth fertile. So there are forms of body or details of the body which go beyond the direct advantage of the individual.

Take the bees. They come out in hot weather. They are covered with a sort of fur or a sort of yellow and black velvet. This fur is not necessary in a hot country, but it collects the pollen from flowers which the bee itself does not use. This pollen, however, is useful to other flowers to which it is brought by them and which are thus fertilized. So the work of the bee is not useful to itself alone, it is useful for the propagation of plants so that one might say that this fur has been developed by the bees for the propagation of plants, not for themselves. Don't you begin to see in this behaviour that animals sacrifice themselves for the welfare of other types of life, instead of trying to eat as much as possible merely for their own

existence or upkeep ? The more one studies the behaviour of animals and of plants, the more clearly one sees that they have a task to perform for the welfare of the whole.

There are certain unicellular animals which live in the ocean and drink such an enormous quantity of water that if they were calculated to the proportion of man, they would need to drink a gallon of water per second during their whole life. Certainly one could call this intemperance, for these animals cannot do it to satisfy their thirst. It is not a vice, however, it is rather like a virtue. They must work at high speed because their task is to filter all the water of the ocean, to eliminate from it certain salts which would be a terrible poison for all the other inhabitants of the ocean.

The same is true of corals. Corals are inferior animals and if the theory of evolution were true, it would be incomprehensible that having been among the first animals to appear, they have remained for millions of years always the same. Why have they not changed ? Because they have a function to fulfil and they fulfil it in a perfect manner. This is the same function as that of the animals mentioned above : to eliminate from the ocean the poisonous matter which is brought into it by the flow of rivers. Their work is that of coating themselves with those salts. This has been going on for millions and millions of years and so we can imagine the enormous quantity of rock they have accumulated. They accumulate enormous quantities and these animals have

been entrusted with the formation of new continents. Look at the innumerable little islands of the Pacific Ocean that today have come into the lime-light on account of the war which has been fought between the Japanese on one side and the Allies on the other. Those islands are constructions made by these animals, the corals. They are the tops of mountains that today are rising out of the water, forming islands. If we study the rocks on dry land, we find that many of them are formed by animals. Even in the Himalayas much of the massif is of coralline origin. We may well say that these corals are the constructors of our continents.

So the more one studies the functions of these animals, the more one finds, that these functions are not for the upkeep of the animal's body only, but that all give their contribution to the harmony of the whole. Let us say then that these animals are not merely inhabitants of the earth: they are the constructors and workers of this earth, they keep it going. This is the vision given by these new discoveries. Once given this light, by studying the geological epochs of the past, we find testimony of similar work carried out by animals which are now extinct. There has always been this relation between the animals and the earth, of the animals between themselves and between the animals and the vegetation. A new science has arisen from this which is called Ecology, a science which is widely applied today and forms an important part of the study

in universities. Ecology is a study of the different behaviours of animals, and it reveals that they are not here to compete with each other, but to carry out an enormous work serving the harmonious upkeep of the earth. When we say they are workers, we mean that each one of them has a purpose, a special aim to fulfil and the result of these tasks is our beautiful world.

A fundamental study today is to consider the task of each upon this earth. Behaviour does not merely fulfil the desire to continue to live. It serves a task which evidently remains unknown and unconscious to the being, because it does not form part of what one might wish. If animals were to become self-conscious, they would be conscious of their habits, of the beauty of the places in which they live, but certainly the corals would never realize or understand that they are the builders of the world, nor would the worms which fertilize the earth consider themselves agriculturists, nor would others consider themselves the purifiers of the environment and so forth. The purpose which places the animals in relation to the earth and its upkeep would never enter their consciousness. Yet life and its relation with the surface of the earth, the purity of the air, the purity of water are dependent upon these tasks. So there is another force which is not the force of the desire for survival, but a force which harmonizes all the tasks. Let us say that each one is important, not because it is beautiful, or because it has succeeded in the struggle for

existence, but because it carries out tasks which are useful to the whole and the effort of each is to try and reach the place allotted to it and the task which it is to fulfil. That is why we said that there was a pre-established plan, and that the organs were formed to fulfil this plan. This pre-established plan puts the animals in relation with the task that they have to accomplish upon the earth. Nor is the purpose of life to perfect oneself, nor only to evolve. The purpose of life is to obey the hidden command which ensures harmony among all and creates an ever better world. We are not created only to enjoy the world, we are created in order to evolve the cosmos. Today the influence of the existence of a cosmic plan is gradually changing the theory of the linear evolution of past times.

CHAPTER VI

MAN'S UNIVERSALITY

THE vision given by the theory of behaviourism shows how each animal species has a task to perform upon the environment and the individuals belonging to that species faithfully carry out the task which has been allotted to them, although they live and function independently from those who have generated them. We may have the impression that animals are free, that they have a free choice and that they struggle with others to have the upper hand. If we look more closely, we see that their freedom is merely to carry out what is in the behaviour of each and each one moves according to the dictates of this behaviour. We see certain animals that proceed by running, other animals by skipping, others by walking slowly and sedately, others by crawling and so forth. If we observe more closely still we find that each species has a task assigned at a different level in the environment, so that certain animals live upon the plains, others live upon the hills, others live upon the mountains, some live in frozen lands and others in torrid zones.

Now, when we study the human kind and compare it with the animal kind, we find some differences and an important one is that the human kind has not had allotted to it a special kind of movement or a special kind of residence. Certainly, it is a facilitation of life to have one's task assigned by nature. The study of nature shows, however, that there is no animal which is as capable as man to adapt itself to any climate or to any place upon this earth. We find man in frozen lands where certain animals such as tigers or elephants cannot live. Yet if you look in the jungle where elephants and tigers are to be found there man can also be found. Man can be found even in deserts. So we can see that man has been allotted no fixed place. He can adapt himself and can live in any part of the world, for he is destined to invade every part of the world. Let us say then that because of this adaptability, man is the only being who is free to go wherever he likes upon this earth.

If we look at the behaviour of animals, we find that this behaviour is expressed in their movements, which stand in relation to the work that they carry out, whereas man has no special movements. Man is capable of the most varied movements which he can acquire very rapidly and very perfectly. Also man can do certain things which no animal has ever been able to do or will ever be able to do. Man has done them from his first appearance upon the earth : he works with his hands. There is no limit to man's behaviour. Each animal, for

instance, has one language. If we take for example an English dog, it will bark in the same fashion as a dog in America. But if we take a Tamilian and bring him to Italy, he will not understand the language there and the Italians will not understand him. Mankind has the most varied languages. The same can be said for movements : man can walk, run, jump and crawl also. Like the fish man can swim. Birds can fly. Man can fly better than birds. Not only this, man is capable of artificial movements such as dancing.

Each animal has but one sort of movement. Man has a great variety of movements. So his behaviour is not fixed like that of the animals. Another thing is also certain. In the child none of these abilities we have mentioned are present. So we can conclude that though it is true that the abilities of man are infinite, each has to be acquired by the human individual during childhood. It is by an active conquest, by work, that he acquires language. He who is born without movement, who is born almost paralysed, by means of exercise can learn to walk, to run and to climb like any animal. But all these capabilities he must acquire by his own effort. Everything must be conquered by him. Whatever abilities man possesses, there must have been a child who conquered them. So we might say that the values of man have their beginning in the work of the child.

We saw that men are to be found everywhere on the earth, in every possible condition and, strange to say,

each one is contented and glad to live where he lives. If we consider the Eskimoes, we find that to them happiness of life consists in the great wide plains covered with snow, in those lights that break the long darkness with vivid colours, in the noise of the winds that howl and penetrate not only the body, but are music to the soul. The cold climate and everything that goes with those conditions of life give them happiness. Nowhere else can they be happy except there. The same can be said for others. The men who live in the tropics find that climate, that special food and those customs essential for their life and happiness. No matter where we look, we will always find the same. Man is in love with his own country. There are certain people who live in places which seem to be absolutely unsuited even to the possibility of life. In Finland, the country is rocky, cold and for long months covered with snow and ice. Yet the recent war between Finland and Russia shows what attachment, what fascination this barren land seems to exercise upon the Finns. If we take Holland, we find that its inhabitants are extremely proud of and attached to their land though we can hardly call it land because it is only by a tremendous amount of work that they wrest the land from the water of the sea and once they have wrested it away, they have to surround it with dykes and they have to pump out the water continuously. And if they have to build a house, they build first the ground upon which the house is to

stand, because otherwise the house would sink. They have to sink trees vertically side by side and create an artificial wooden platform upon which can be put the foundations of the house. A country with most undesirable conditions, yet see with what ferocity they fought for that piece of land ! And how beautiful it seems to them ! It has produced some of the greatest painters. It is this attachment, this affection to the place, to the country, which makes it possible that the whole earth is peopled by men. Because if each people sought for the best conditions of life, for the most fertile of the lands, much of the world would be uninhabited. It is this attachment, this love for whatever country one lives in, that makes the whole world inhabited by human beings.

Now, the curious part is that when we consider man in his adult stage, we see that he is one of the least adaptable beings. An Indian certainly does not like to live anywhere except in India. If the Indian adult goes outside for study or for work, he is always hankering to come back. And we who are accustomed to the Mediterranean environment and a temperate climate, we cannot adapt ourselves to the icy North. Yes, it is very nice to go to the desert to see strings of camels travelling along. It is fascinating and romantic, but not pleasant to live there.

We are attached to our environment, but also to the times we live in. If we consider Europe of some years ago, it had a much simpler life than it has now-a-days.

There were no railways or other fast means of communication. Travelling was done by horse carriages, horses had to be changed, people spent days and days to go from one country to another. In order to get news of their family, they would have to wait for months. Suppose a modern man from America came into such conditions. He would find it impossible to live. Or let us take somebody who lived a few centuries back. Everything was calm and peaceful. No trains, no electric light, no trams, no underground rumblings of sub-ways, no noise. If a person of those days were taken to New York today with its tremendous traffic, all the bustle and noise that goes on there day and night, where people always hurry, where darkness becomes a fantastic display of electric light advertisements, where no peace, no silence is to be found, he would say : " I cannot live in this place ".

So here we see a contrast. Previously we have described man who is capable of loving and adapting himself to the worst conditions that the earth can present and who can live happily no matter in what country. Now we find that men of different centuries could not live and adapt themselves to the more evolved stage of civilization of more modern times just like we could not adapt ourselves to the slow fashion of living of the previous age. We are happy to live in our age as our forefathers were happy to live in their ages.

We see that as society and civilization evolve, conditions change and if men were fixed in their behaviour

like animals, they would not be able to adapt themselves to the new conditions. Let us consider language. No language is born as it is now. Language evolves like everything else. First it is simple. Then it becomes more complicated. How is it that those who live in a time when language is so complicated, take it without pain and without paying any attention to it learn it so easily ?

Where does the explanation lie ? We face a contradiction. There is a sort of mystery. Man must adapt himself to the changing conditions of civilization. The older humanity becomes, culture progresses the more. So there must be a continuous adaptation on the part of man, not only to geographical changes as we saw, but also to the continuous changes of civilization. And yet as we saw, adult man is not very adaptable. Here is a real enigma !

The Child—Instrument of Adaptation

The solution is found in the child, whom we can call the instrument of the adaptability of humanity. The child whom we saw born without any special movement, not only acquires all the human faculties, but also adapts the being that it constructs to the conditions in his environment. And this takes place because of the special psychic form of the child, for the child's psychic form is different from that of the adult. Psychologists today show great interest in the study of this different form of

psychology. The child stands in a different relationship to the environment. We may admire an environment. We may remember an environment, but the child *absorbs* it into himself. He does not remember the things that he sees, but he forms with these things part of his psyche. He incarnates in himself the things which he sees and hears *i.e.*, in us there is no change, in the child transformations take place. We merely remember an environment while the child adapts himself to it. This special kind of vital memory, that does not remember consciously, but absorbs images into the very life of the individual has received from the psychologists a special name: they have called it *Mneme.*

We have an example of this in language. The child does not remember the sounds of language. The child incarnates these sounds and he can pronounce them better than anybody else. He speaks the language according to all its complicated rules and all its exceptions, not because he studies and remembers it by means of ordinary memory, perhaps his memory never takes it consciously. Yet this language forms a part of his psyche, forms a part of him. This is a phenomenon different from mere mnemonic activity. It is a psychic feature that characterizes an aspect of the child's psychic personality.

There is in the child an absorbent sensitivity towards whatever is in his surroundings. And it is by beholding and absorbing the environment that one becomes adapted

to it. This faculty reveals a subconscious power that is only found in the child.

The first period of life is the period of adaptability. We must be very clear as to what we mean by adaptability in this case. We must distinguish it from the adaptability in the adult. The biological adaptability of the child is that which makes the only place one really loves to stay in, the place where one is born. Just as the only language that one speaks well is one's mother tongue. Now an adult person who goes to a country other than his own, never adapts himself to it in the same fashion or to the same degree.

Let us take the example of those men who go voluntarily to another country in order to spend their life there, *e.g.* the missionaries. Missionaries are people who by their own will choose to go and live in another country. And yet if you speak to them, they usually say : "We sacrifice our lives by living in this country". This denotes the limitations of the adaptability of the adult.

Let us now take the child. The child is an individual who loves whatever locality he is born in to the point that he could not be happy anywhere else, no matter how hard is the life there. So the man who loves the frozen plains of Finland and another who loves the dunes of Holland has each received his adaptation, his love for his country, from the child he once was.

It is the child who practically and actually realizes this adaptation. The adult finds himself prepared,

adapted, suited to his country, so that he feels the love and special fascination for the place where he lives, so that happiness and peace for him are only found there.

In former times, in Italy, the people who were born in a village lived and died there and never moved away from it. Later people who got married sometimes moved elsewhere and gradually the original population were scattered from their native places. By and by a strange malady came about. People became pale, sad, weak, anaemic looking. Many cures were tried but in vain. So at last when it could not be cured in any other way, the doctor said to the relatives: "I think you had better send this person to get a breath of his native air". And the person was sent to his home town, or the farm, or wherever he was born and after a little while he came back fully cured. People said that a breath of the native air, was better than any amount of medicine, but the air itself was often much worse than that of the place where one was suffering. What this person really needed was the quiet given to his subconscious by the conditions of the place where he had lived as a child.

Now there is nothing more important than this absorbent sort of psyche which forms man and adapts him to no matter what social conditions, to no matter what climate, to no matter what country. It is upon this that we must concentrate and work. When one says: "I love my country", one does not say something

superficial, something artificial. It is something which forms a part of one's own self, of one's own life.

From what we have said above we can also understand how the child absorbs by this type of psyche, the customs that he finds in the land, the habits, etc., and thus forms the individual who is typical of his race. This 'local' behaviour of man, *i.e.*, of man suited to the special country in which he lives, is a mysterious construction which takes place during childhood. It is evident that men acquire customs, habits, mentality, etc. peculiar to their own surroundings because none of them is natural to humanity. So we have now a fuller picture of the work of the child. He constructs a behaviour suited not only to the time and to the place, but also to the mentality of the place. Here in India there is a great respect for life, a respect which leads to veneration also of animals. This cannot be acquired by an adult person. It is not by saying : "Oh, life must be respected" that this feeling is acquired. I may reason that those people are right and feel that I also must respect animal life, but with me it is not a sentiment, it is reasoning. What I cannot feel is the sort of veneration that some Indians feel for the cow, for instance, whereas people who possess it can never get rid of it. Other people have their religion and even if their mind eventually rejects it, still at heart they feel uneasy, restless. These things form part of us as we say in Europe : "they are in our blood". The things that together

form the personality, sentiments of caste and all sorts of other feelings that make a typical Italian, a typical Englishman, a typical Indian, are constructed during childhood by this mysterious sort of psychic power that psychologists call Mneme. This is true for everything, even for certain types of characteristic movement that distinguish different races. There are certain people in Africa who develop and fix qualities which are provoked by the need of defence against wild animals. They do certain exercises in order to render their hearing sharper. Sharpness of hearing is one of the special characteristics of the individual of that special tribe. In the same way all characteristics are absorbed by the child and fixed in the individual. There are certain religious sentiments which remain in spite of the fact that the mind may later on reason otherwise and reject the teachings of this religion. Something continues in the sub-conscious, because what has been formed by the child can never be totally destroyed. This Mneme, which may be considered as a superior natural memory, not only creates characteristics, but holds them alive in the individual. The individual changes, it is true, but those things which are formed by the child remain in the personality just as the legs remain, so that each man has this special character.

One would like to change individual adults. Often we say : " This person does not know how to behave ". Often we call such and such a person bad-mannered.

He or she knows it, they feel humiliated, because they recognize that they have 'a bad character', but the fact is that it cannot be changed. In the same way in which this type of psychology leads the child to the wonderful acquisitions of civilization, to the complications and elaborations of modern language, it also leads him to fix in his psyche certain things which reason would like to eliminate from the personality, but which cannot be changed. The same phenomenon explains the adaptation to, we might say, different phases of history, because, while an adult of olden times could not adapt himself to modern times, the child adapts himself to the level of civilization which he finds, no matter what the level of that civilization may be and succeeds in constructing a man suited to those times and those customs.

So today the child begins to be visualized as it should be, as the connection, the joining link between different phases of history and different levels of civilization. Childhood is now considered by psychologists as a very important period because they realize that if we wish to give new ideas to the people, if we wish to alter the habits and customs of the country, or if we wish to accentuate more vigorously the characteristics belonging to a people, we must take as our instrument the child, as very little can be done by acting upon adults. If one has really a vision of better conditions, of greater enlightenment for people, it is only the child that one can look upon

in order to bring about the desired results. If there are people who think that their customs are degenerate, or others who want to revive old ones, the only individual with whom they can work is the child. They will never have success with the adults. If anybody wants to have an influence upon society, he must orientate himself towards chilhood. In past times people tried to influence adults. Now they have understood better and they start schools for children because in the children the construction of humanity takes place. They construct with what we give them. Let us suppose that a statesman wanted to try and change the customs of his people. Strange as it may sound, this person must take into great consideration the children of his country. This has actually happened recently among different nations. A person set out to make warrior-like people out of those who were very peaceful, of a loving nature. He tried with the grown-ups, but in the end he had to take the young children. Mussolini did so in Italy, Hitler followed suit in Germany. The Fascist hymn begins with the words 'Youth, Youth'. This was the main trend of their policy, to make use of the creative spirit of youth, but soon they had to go towards even younger people and soon the hymn should have sounded 'Infancy, Infancy'. By taking children of three years and younger and by creating around them an atmosphere of enthusiasm, of dignity, of activity, in one generation the character of the whole people was changed.

The mentality we fight today was neither the original character of the Italian people nor perhaps that of the Germans, but by creating an atmosphere, an enthusiasm based upon 'our glory' around the children, these rooted so firmly this warrior-spirit in their psyche that no matter what disaster may fall upon the nation, this spirit will not die. With older people one can reason, but not with the young ones. They will fight till they are dead. If they are defeated they will continue to fight underground. And you see the different methods and how even ordinary democracy is not the answer to our needs, for children cannot choose a leader because they do not understand. We cannot hold a meeting of children of three years in order to make them understand political idealism or to make them warriors. In order to influence them, you must do so by means of the environment, because the child absorbs the environment, he takes everything from the environment and incarnates it in himself. He can do everything. He is really omnipotent, whereas the adult who is already formed cannot change. So we have in front of us a clear vision. If we wish to change a generation, if we wish to influence it either towards good, or evil, if we want to reawaken religion or add culture, whatever it is that we may wish to do, we must take the child.

The power of the psyche is something parallel to what has been discovered in the embryo. By action upon the embryo, you can either make a monster or a more

perfect being. Indeed, experiments have been made by transfering the sanglion and arms have been made to develop on the back. But in an adult, one could not do it. It is the same here for the psyche. You cannot create man, but you can make him more perfect by acting upon the psychic embryo. This gives great power to the adults and to education because it confers control over psychic growth and psychic development. This power is immense if we compare it to the power society has had when it acted merely upon the adult. The child gives us a new hope and a new vision. Perhaps a great many modifications which would bring more understanding, greater welfare, greater spirituality can be brought about in the future humanity.

CHAPTER VII

THE PSYCHO-EMBRYONIC LIFE

LET us repeat again that the child at birth is endowed with psychic life. If this be so, this psychic life may not have begun then. If it exist, it may already have been built, otherwise how could it be there? Also in the embryo there may be psychic life. When one conceives this idea, one wonders at what period of embryonic life the psychic life begins. Let us consider certain cases. We know there are occasions when a child is born at 7 instead of at 9 months and at 7 months the child is already so complete that it can live. Therefore its psychic life is capable of functioning like that of the child who is born at 9 months. I do not want to insist upon this question, but this example will suffice to illustrate what I mean when I postulate that all life is psychic life, and that even as an embryo the child is endowed with a psyche. As a matter of fact, each type of life has a specific quantity of psychic energy, a specific kind of individual psyche, no matter how primitive the form of life is. Even if we consider unicellular beings, we find that there is a kind of psyche, they move away from

danger, towards food, etc. To give an example, there is a unicellular being which is called the little vampire of the spirogyra. This little being, out of all the plants in the water, feeds upon a special weed. In order to do this it must have a specific psychic individuality which makes it choose this plant. It must, in other words, be endowed with a specific behaviour.

Each type and especially every animal form of life has a special irresistible way of conducting its life which shows that their actions are directed by a special form of psyche. If we were to leave the strictly scientific field we might say that there is a psychic director who distributes all the activities upon the earth using different types of life to do so. In other words today life is considered as a great energy, one of the energies of cosmic creation. Therefore, why should it surprise us when people state that the new-born child is endowed with psychic life? Indeed if it were not so, how could it be alive?

This conclusion made a great impression because previously the child had been considered void of psychic life. Many began to study and meditate upon the fact that the child is endowed with a psychic life even before birth.

If one is endowed with psychic life, one receives impressions and at birth a great shock must be felt by the child. This is a new point which makes thinkers dwell upon the drama of birth, the fact of a psychic life,

of a living being thrown all of a sudden from one environment into another vastly different. This sudden change of environment is even more impressive when one considers the condition of the child at birth. The new-born child is not fully developed and indeed the more people study it, the more they realize how incomplete it is even physically. Everything is unfinished. The legs with which he will walk upon the earth and invade the whole world are still cartilaginous. The same is true of the cranium that encloses the brain which is in need of a strong defence, but in the new-born child the head is not yet ossified. Only a few of its bones are developed. More important still is the fact that the nerves themselves are not completed so that there is a lack of central direction and therefore a lack of unification between the organs, so that this being, whose bones are not yet developed, is at the same time unable to obey the urge to move because every urge is transmitted by nerves and they are not yet fully developed. So in the human new-born, there is no movement whilst among animals the new-born walk almost at once. The conclusion is this : the child at birth is still in an embryonic stage. Thus we must consider the child as possessing an embryonic life that extends before and after birth. This life is interrupted, we might say, by a great event, the great adventure of birth, by which he plunges into a new environment. The change in itself is terrific ; it is as though one went from the earth

to the moon. But this is not all ; in order to make this great step the child must make a tremendous physical effort. Generally the fact that the child goes through so difficult an experience is not considered. When a child is born, people think only about the mother, and how difficult it has been for her. The child, however, passes through a greater trial than the mother, especially if one considers that the child is not even complete, but is nevertheless endowed with a psychic life. Let us therefore remember that the new-born child does not possess developed psychic faculties because he has yet to create them, this psychic embryo, which even physically is not complete, must create its own faculties.

Let us then continue to reason along this line. This being which is born, powerless, motionless, must be endowed with a behaviour that leads it towards movement. The formation of those human faculties which do not exist and which must be created, represents a further period of embryonic life : the psycho-embryonic life.

This physically incomplete new-born child must complete the complicated being who is man : he must create man's psychic faculties.

After birth psychic development takes place following the line dictated by behaviour. In other words, it is the psychic development which creates movement. The instincts which in other animals seem to awaken at birth, as soon as the animal comes into contact with the outer

environment, must in man be built by the psyche. It is the psyche which must construct the human faculties and along with that the movements to correspond to those faculties. And while this goes on the physical part of the embryo finishes its development. The nerves become mielinized and the cranium ossified. It seems as though the human embryo were born incomplete because its final form and its functions must wait until the psyche has built itself.

Little chickens, when they come out of the egg but wait for the hen to show them how to pick up food and immediately start to behave like all other chickens. This is so now, this was so in previous generations and it is to be expected that it will always be so. For man this is not the case, because man, before he starts to move, must develop his psyche. Therefore he is born incapable of movement. The psyche must be constructed according to the evolution of man, according to the environment in which man finds himself, according to the conditions he finds around him, because he must build man suited to his time and conditions.

The movements are built up together with the psyche *i.e.*, the psyche while it develops its faculties, also develops the movements that express them and thus such behaviour is built that man is adapted to his time and to his conditions. The first active experiences upon the environment must wait until the formations of the psychic faculties have been laid.

Several consequences follow this fact. One is that from birth itself the most important side of life in man is the psychic life, not movement, because movements must be created following the guide and dictates of the psychic life. Intelligence is what distinguishes man from all animals. The first act of man in this life must therefore be the construction of intelligence. While both the skeleton and the nervous system await the construction of this intelligence, the body remains inert. It has to wait, because this is not the body of a being whose behaviour is prefixed. Nature has taken its precautions, it has deprived man of the power of movement and made his body soft-boned, because before starting on his experience upon the environment, he must wait until he has made a great psychic acquisition. It is logical that if psychic life is to construct itself by incarnating the environment, the intelligence must observe and study first, it must gather a great quantity of impressions from it, just like the physical embryo begins with a great accumulation of cells before starting to build its special organs.

The first period of life has been reserved in order that impressions may be collected from the environment. This is logical because how could man orient himself in the environment if he started to walk immediately after birth, unless he were endowed with fixed instincts like those of the animals ?

This is the marvellous part. In the life of man the first period is one of the greatest psychic activity. It is

then that the accumulation of impressions is made upon which intelligence builds itself afterwards.

Also, as it is towards his environment that the movements of man are directed and as man is born in different environments and in different historical epochs, as he must adapt himself to them, it is imperative that at first the psyche receive and accumulate a great deal of nourishing matter which lays the foundation of this special adaptation to the specific environment and historical epoch in which the individual is born. The first year of life then appears to us as a period of the greatest activity leading to the absorption of everything that there is in the environment. In the second year the physical being nears completion, its movement begins to become determined. This shows how clearly nature has planned that the movements of man be determined by psychic life.

This is all the more impressive because people in olden times said that children who cannot move and cannot speak were psychically speaking non-existent. What a change ! Then people thought that the small child had no psychic life whereas now it is known that the main activity during this first year is of the brain.

Now if with this vision, we consider again the new-born child, we seem better to understand why the size of the head of the one year old child is double the size of that of the new-born child. And at the third year its size is already half of that of an adult. And when the child is

four years of age, the size of its head is 8/10 of that of the adult. (Fig. 7.)

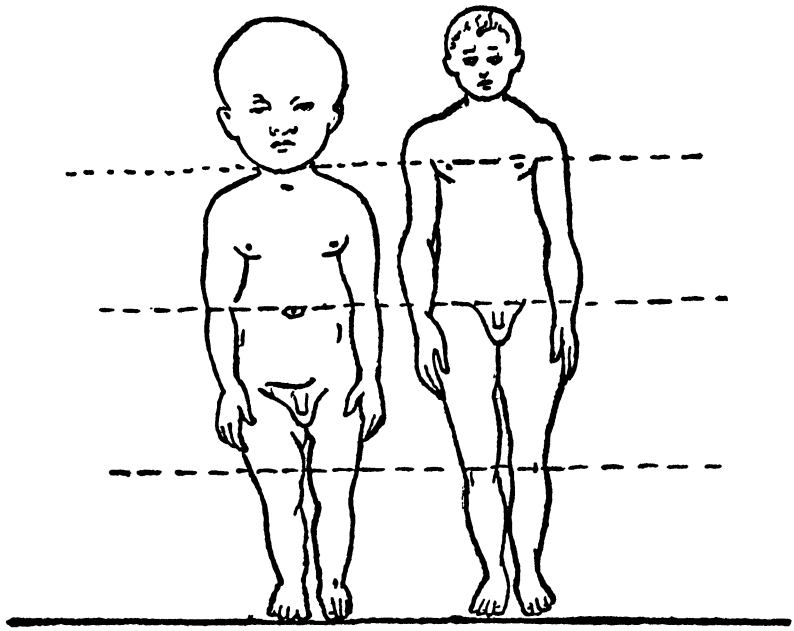


FIG. 7
A new-born child and an adult brought to the same scale show the difference in the proportions of their bodies.

How clearly one sees then that the human being grows especially in intelligence, in psychic life, and that all the rest of growth is but that of an instrument of this psychic life as it develops its faculties.

This, if it shows anything, shows the importance of the first year for the rest of life and that the child of man is characterized by his intelligence. This also shows the greatest difference there is between man and the animals. Animals merely have to obey the instincts of

their behaviour. Their psychic life is limited to that. In man there is another fact : the creation of human intelligence. What man will do in the future we do not know and we cannot know from the new-born child. The intelligence of the child will have to take in the present of a life which is in evolution, which goes back hundreds of thousands of years in its civilization and which has stretching in front of it a future of hundreds, of thousands, of millions of years perhaps : a present that has no limit either in the past or in the future, and that is never for a moment the same : its aspects are infinite whereas for the others there is but one aspect which is always fixed.

For man there is no limit. Human intelligence is the centre which must be taken into consideration when man is studied. Certainly this psychic life which has the possibility of going towards the infinite, which is destined to go towards the infinite, must begin in some mysterious fashion. It begins before birth because in the mind of the new-born we find powers so strong that they have the possibility of creating any faculties, of adapting man to any condition.

The various impulses of man have as their basis this psychic life. This point must be clearly visualized before we go on and before we can understand the psychic development of the child. There is something else which must be considered and that is the essence of the mind of the child and its way of functioning, because this mind is so very hungry in the first year of

life that it wants to gather impressions of everything that exists in its environment. It does not absorb anything consciously. It is life with its powers that guides the development of the child. What is the nature of this psychic life ? We must understand this if we are to understand some of the future actions of the child. How does the child re-act to external things ?

Birth Terror and its Reactions

Psychologists are today struck by what they call the ' difficult adventure of birth ', and conclude that the child at birth must undergo a great shock of fright. Today one of the scientific terms of psychology is ' birth terror '. Certainly, it is not a conscious terror, but if his conscious psychic faculties were developed, he would express himself by bitter words : " Why have you thrown me into this terrible world ? What can I do ? How shall I be able to adapt myself to a life which is so different from my own ? How am I going to adapt myself to the terrific amount of sounds, I who had never heard even the slightest whisper before ? How shall I take upon myself these very difficult functions which you, my mother, took upon yourself for me ? How can I digest and breathe ? How shall I be able to withstand these terrific changes of climate in the world, I who have been in a temperature that was always of the same agreeable warmth of your body ? "

Now, the child is not conscious of all this. He could not say that he is suffering from birth terror. There must

be a psychic feeling different from the conscious, because if he were conscious the child would say " Why have you abandoned me ? You have left me who am wounded. You have abandoned me, who have no strength. How had you the courage to do so ? "

This would be his reasoning if he were conscious, but he is not conscious. Yet in his sub-conscious he is very sensitive, and he must feel very nearly something corresponding to what we have expressed above.

This must be taken into consideration by those who study life. The child must be helped in his first adaptation to our environment as his psyche must, through birth, receive a terrific shock. There is no doubt that the child can feel fright.

Very often we have seen children who, if quickly lowered into the bath in the first hours of life, made a grasping movement, as one does when one is falling. That shows that they felt frightened.

What help is there in nature ? Nature does give help to the young in this difficult adaptation. Nature gives mothers the instinct of keeping their child close to their own body and to protect him from light. And the mother herself has been made powerless by nature during this period. Not too much energy is left to her. By keeping quiet for her own sake she gives the needed quiet to the child. It is as though sub-consciously the mother were reasoning : " This child has received a terrific shock. I must keep it close to me ".

She warms it with her warmth and she protects it from too many impressions.

Human mothers do not do this with the enthusiasm we see in mothers of other types of life. We see the mother-cats who hide their young in some dark hole and they are very jealous if somebody comes near them, whereas human mothers seem to have lost this animal instinct. As soon as the child is born somebody comes, washes it, dresses it, puts it into the light to see the colour of the eyes, etc. That is why the human kind is in danger. It is no longer nature that guides, but human reasoning and the reasoning is faulty because it is not enlightened by understanding. It is a reasoning which considers that the child is not a being endowed with a psyche. This birth-terror, it has been observed today, leads to something much more terrible than vocal protests, it leads to wrong characters assumed by the child as it develops. The consequence is a psychic transformation, or rather, instead of taking the path which we might say is normal, the child takes a wrong path. The faulty characters are to be found not only in the child, but remain in the adult. They have been included in the general term of 'psychic regressions'. Instead of progressing, instead of going forward along the path of life, individuals suffering from a negative reaction to birth-terror seem to remain attached to something which existed before birth. These characters of regression are several, but they all give the same impression. It is as though

the child were reasoning in this fashion : " My goodness, how terrible is this world, I am going back to where I came from". The long hours of sleep in the new-born are considered normal, but too long sleep is not normal even in the new-born and it is considered as a sort of refuge due to a psychic repulsion from the world and a means to seek oblivion from the earth.

And is it not so ? Is not sleep the kingdom of the sub-conscious ? If something unpleasant troubles our mind, let us sleep. For in sleep there are dreams, not realities, in sleep there is a life in which there is no necessity for struggle. Sleep is a refuge, a getting-away from the world. Another fact is the position of the body in sleep. In the new-born child the natural position is to double up with the hands near the face, and the legs next to the body. This however continues also in some older people, and is, we might say, a refuge into the pre-natal position. Then there is another fact. This is clearly a character of regression. When children wake up, they start crying as if they were frightened, as if they were living again through that terrible moment of birth which brings one into a difficult world. Often they suffer from nightmares. These form a part of the terror of life.

Another expression of this tendency is to attach oneself to somebody as though one was afraid of being left alone. This attachment is not affection. It is something which has fear in it. The child is timid and always wants to remain near someone, the mother

preferably. He is not happy to go out, but would always like to remain at home isolated from the world. Everything in the world that should make him happy frightens him, he feels repugnance from new experiences. The environment instead of proving attractive, as it should to a being in course of development, is repellent. And if a child, from the very first infancy feels repulsion towards this environment, which ought to be its means of development, certainly this child will not develop normally. He will not be the child who conquers, who is destined to take the whole of his environment and incarnate it in himself. He will do so, but with difficulty and incompletely. He is the very picture of the saying ' To live is to suffer '. To do something is, to him, to go against his own nature. Even respiration seems to be hard. People of this sort require much more sleep and rest ; even digestion seems to be difficult. So you see what sort of life this type of child prepares for himself in the future, for these characters are things not only of the present, but also of the future. He is of the type who cries easily. He will always require somebody to help him. He will be indolent, sad and depressed. And these are not passing features. They remain as characteristics for life. Even when an adult, he will feel repulsion for the world, will fear to meet people and be always timid. It is evident that such beings are inferior to others in the struggle for existence in social life. It will not be the lot of these people to have joy, courage and happiness.

This is the terrible answer of the subconscious psyche. We forget with our conscious memory, but though the subconscious appears not to feel and though it does not seem to remember, it does something worse. The impressions made there, are made upon the Mneme ; they remain engraved as characteristics of the individual. Therein lies the great danger to humanity. The child, not properly cared for, will take revenge on society through the individual that it forms. The treatment does not foment rebels as it would amongst adults, it forms individuals who are weaker, inferior to what they ought to be ; it forms characters that will be an obstacle to the life of the individual, and individuals who will be an obstacle to the progress of civilization.

CHAPTER VIII

THE CONQUEST OF INDEPENDENCE

THE characteristics of regression are developed when the child has been unable to achieve the first adaptation *i.e.*, soon after birth. Certain tendencies which can be traced back to this remain also in the adult.

Modern psychologists describing these characters of regression say that when they are not there, then the child presents tendencies which are very clearly and very strongly set towards independence. Then development is a conquest of ever greater independence. It is as though an arrow had been sent flying from the bow and it goes straight, sure and strong. So does the child proceed along the path of independence. This is normal development : an ever growing and more powerful activity shown along the path that leads to independence. The conquest of independence begins from the first commencement of life. As the being develops, it perfects itself and overcomes every obstacle that it finds on its way. A vital force is active in the individual and leads it towards its own evolution. This force has been called *Horme.*

If one had to find something to compare to this Horme in the conscious psychic field, one would have to compare it to the force of will, although there is very little analogy between the two. The force of will is something too small and too much attached to the consciousness of the individual, whereas the Horme is something which belongs to life in general, to what we might call a divine force which is the promotor of all evolution. This vital force of evolution is expressed in the child by a will to perform certain actions. This will cannot be broken by anything short of death. I call it 'will,' because we possess no better word to describe it. It is not will, however, because will implies consciousness and reasoning. It is a subconscious vital force which urges the child to do certain things and in the normally growing child its unhindered activity is manifested in what we call 'joy of life'. The child is enthusiastic, always happy.

These conquests of independence are in the beginning the different steps of what is generally known as natural development. In other words, if we examine natural development closely, we can describe it as the conquest of successive degrees of independence. This is true not only of the psychic, but also of the physical field. The body also has a tendency to grow, a tendency so strong that nothing can stop it short of death.

Let us then examine this development. The child at birth frees himself from a prison, the prison of the body

of the mother. At birth he becomes independent of the functions of the mother. The new-born child is endowed with an urge, an impulse to face the environment and to absorb it. We might say that he is born with the 'psychology of conquest of the world.' He absorbs it in himself and in absorbing it, he forms his psychic body.

This is the characteristic of the first period of life. It is evident that if the child feels this urge, if the first impulse he feels is the desire to conquer the environment, this environment must exert an attraction on the child. Therefore we say, using words which are really not appropriate to describe the fact, that the child feels 'love' for the environment.

The first organs which begin to function in the child are the sensory organs. Now what are sensory organs but organs of prehension, instruments by means of which we grasp the impressions which, in the case of the child, must be incarnated ?

When we gaze, what do we see ? We see everything there is in the environment. As soon as we start hearing, we also hear every sound there is in the environment. We might say that the field of prehension is very wide, that it is almost universal. This is the way of nature. One does not take in sound by sound, noise by noise, object by object, we begin by taking in everything, a totality. The distinctions of object from object, sound from noise, sounds from sounds, come later as an evolution of this first global gathering in.

This is the picture of the normal child's psyche. At first it takes in the world and then it analyses it.

Now let us suppose another type who does not feel this irresistible attraction for the environment, a type in whom this great fondness has suffered damage by fright, by terror. It is evident that the development of the first type must be different from that of the second.

Let us continue to examine the development of the child by considering the child at six months of age. Certain phenomena present themselves which are looked upon as sign-posts of normal growth. At the age of 6 months the child undergoes certain physical transformations. Some of these are invisible and have been discovered only through experiments, *e.g.*, the stomach begins to secrete chloric acid which is necessary for digestion. It is also at six months that the first tooth makes its appearance. This is a further perfection of the body which at birth is not finished and develops along a certain path of growth. It also means that at six months the child is capable of living without the milk of his mother, or at least of supplementing milk with other substances. This is a further conquest of independence. If we consider that the child up to that age had been absolutely dependent upon his mother's milk because if he were to take anything else he would not be able to digest it, we realize what a great degree of independence he acquires at this period. The 6 months' child seems to reason : " I do not want to live

upon my mother. I am a human being and I can eat everything now." An analogous phenomenon takes place in adolescents who begin to feel the humiliation of being dependent on their family. They do not want to live on them. They would like to live by their own resources.

It is also at about this epoch (which seems to be a critical moment in the life of the child) that he begins to utter the first syllables. This is the first stone in the great building which will develop later into language which is another great step, another great conquest of independence. When the child acquires language, he can express himself and does not have to depend upon other people to guess his needs. Instead of somebody having to guess what he, the child, wants, he can express himself. He can tell everybody : " Do this. Do that." Thus he comes into communication with humanity, because without language how can one communicate ? This conquest of language and this possibility of intelligent communication with others is a tremendous step towards independence. Before acquiring it the child may be compared to a deaf and dumb person, because he cannot express himself and he cannot understand what other people say. After the conquest of language it is as if he suddenly acquired ears and the possibility of uttering the speech of the people around him.

A long time after that, at one year of age, the child starts to walk. This is to become free of a second

prison, because now he can run on his own two legs and if you come near him, he can get away. He can say: "I can run on my two legs, I can express with language my thoughts to men like you."

Thus man develops gradually and by means of these successive steps of independence, he becomes free. It is not a question of will, it is, a phenomenon of independence. Really, it is nature that is giving to the child the opportunity of growing, gives him independence and at the same time leads him to freedom.

The 'conquest of walking' is very important, especially if one considers that, in spite of being very complex, it is achieved in the first year of life and is made together with all the other conquests of language, of orientation, etc. To walk is for the child a physiological conquest of great importance. Animals do not need to make it. It is only man who has this prolonged and refined type of development. In his growth he has to make three different achievements, three conquests, before being physically able to walk, or even to stand erect on his two legs. Look at those majestically looking animals, the oxen. Imagine if at one year of age calves just began to stand on their legs. Indeed they do not. They begin to walk as soon as they are born. Yet these animals are inferior to us, even if they are gigantic in construction. We are so apparently powerless because the construction of man is much more refined and takes therefore much more time.

The power of walking and being able to stand on one's two legs entails a thorough development composed of different items. One of them concerns the brain. There is a part of the brain called the 'cerebellum' which is situated under its larger portion. (See fig. 8).

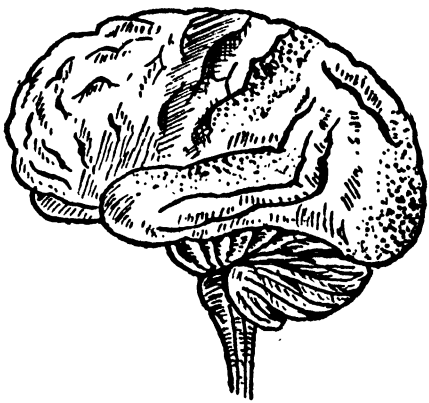


FIG. 8
The cerebellum at the base of the brain

It is just at six months that the cerebellum develops rapidly and this rapid development of the cerebellum continues until the child is 14 or 15 months. Then the growth of the cerebellum is slower, but continues nevertheless until the child is 4½ years. The possibility of standing on two legs and of being able to walk erect depends on the development of the cerebellum. In the child this development can easily be followed. We see the two developments following each other step by step : the child begins to its up at six months of age, starts to crawl at 9 months, stands at 10 and walks between 12 and 13 months, while at 15 months the child walks with security.

The second item of this complex development is the completion of certain nerves. If the spinal nerve, through which the direct command to the muscles must pass, were not completed, it could not pass and it is only

during this period that the nerves become completed. How complex is development and how many things have to come into harmony before the conquest of walking can be made. This however is not all. There is a third achievement to be made : the development of the skeleton. The legs of the child are not completely ossified, as we have seen. They are cartilaginous and that is why they are so soft. If this is the case, how can they support the weight of the body ? Therefore the skeleton has to be complete before the child can start to walk. Still another thing is that the bones of the cranium were not united at birth and only now they become complete, so that, if the child falls down, he is not in danger of injuring his head.

If by means of education we wished to teach the child how to walk before this time, we could not do it, because the fact of being able to walk is dependent on a series of physical developments, which take place simultaneously. If one tried one could not achieve anything without seriously damaging the child. Here it is nature which directs. Everything depends on her and has to obey her exact commands. At the same time, if you tried to keep the child who has started to walk and run from doing so, you would not be able to do it, because in nature whenever an organ is developed, this must be put in use. Creation in nature is not to make something, but also to allow it to function. As soon as the organ is complete, it must immediately be used in the environment.

In modern language these functions have been called 'experiences upon the environment.' If these experiences do not take place, then the organ does not develop normally because the organ, incomplete at first, must be used in order to accomplish its completion.

The child can only develop by means of experiences upon the environment, we call them 'work.' As soon as language appears the child begins to chatter and no one can silence him. Indeed one of the most difficult things is to make a child stop talking. Now if the child were not to talk or to walk, then he would not be able to develop normally. There would be an arrest in his development. Whereas the child walks, runs, jumps and by doing this he develops his legs. Nature first makes the instruments, and then develops them by means of functions, through experiences upon the environment. When, therefore, the child has increased his independence by the acquisition of new powers, he can only develop normally if left free to function. When the child has acquired independence, it is by exercising this independence that he will develop. Development does not come of itself, but, as modern psychologists express it, 'the behaviour is affirmed in each individual by the experiences this individual carries out upon the environment'. If therefore we think of education as a help to the development of the child's life, we cannot but rejoice when a child shows signs of having attained a certain degree of development. We cannot help saying : " My child has today said his first

word " and rejoice about it. Especially inasmuch as we know we cannot do anything to bring about this event. If, however, we realize that, although the development of the child cannot be destroyed (because nature is too strong for us, thanks be to God), it can however be kept incomplete or retarded if the child is not given an opportunity of carrying out experiences upon the environment, then a problem does arise : The problem of education.

The first problem of education is to furnish the child with an environment which will permit him to develop the functions that nature has given to him. This is not an indifferent question. It is not a question of merely pleasing the child, of allowing him to do as he likes. It is a question of co-operation with a command of nature, with one of her laws which decrees that development should take place by means of experiences upon the environment. With his first step the child enters a higher level of experiences.

If we observe the child who has reached this level, we see that he has a tendency to acquire still further independence. He wants to act in his own way, *i.e.*, he wants to carry things, to dress and to undress alone, to feed himself, etc. And it is not by following our suggestions that the child begins to do things. On the contrary he has such a strong urge, such a vital impulse that our efforts are usually spent in restraining him from doing things. It is not the child that we fight when we do this, it is nature. It is not the child's will that we fight,

he merely collaborates with nature and obeys her laws and step by step, first in one thing, then in others, he acquires ever increasing independence from those who surround him, until a moment comes when he will want to acquire mental independence too. Then he will show the tendency to develop his mind through his own experiences and not through the experiences of other people. He begins to seek out the reason of things. And thus it is that the human individuality is constructed during this period of childhood. This is not a theory. This is not an opinion. These are clear natural facts, they are observed facts. When we say that we must render the freedom of the child complete, when we say that his independence and his normal functioning must be assured by society, we do not speak about a vague ideal. We speak because we have observed life, we have observed nature and nature has revealed this fact. It is only through freedom and by experiences upon the environment that man can develop.

Now, when we speak of independence and freedom for the child, do not transfer to this field the ideas of independence and freedom that we hold as ideal in the world of adults. If the adults were to examine themselves and give a definition of independence and freedom, they could not do so with exactness. In reality they have a very miserable idea of what freedom is. They have not the largeness that nature has. The child offers the majestic vision of nature that gives life by

giving freedom and independence. She gives it with determined laws regarding the time, and the needs : she makes freedom a law of life : either be free or die. I believe that nature offers us help and aid for the interpretation of our social life. It is as though the child offered us the picture of the whole and we in our social life took only small details. The child is right in this sense that what he shows leads to reality, to truth. When there is a natural truth, there can be no doubt about it. It is interesting therefore to consider the freedom of the child which is achieved through growth.

What is the aim of this ever increasing conquest of independence ? From where does it arise ? It arises in the individuality that forms itself, that is able to function by itself. But in nature all living beings have the tendency towards this. Every living being functions by itself. So in this also the child obeys the plan of nature. He achieves that freedom which is the first rule of life in every being.

How does the child acquire this independence ? He acquires it by means of continuous activity. How does the child realize his freedom ? By means of continuous effort ; what life cannot do is to arrest itself, to stop. Independence is not static. It is a continuous conquest. And by means of continuous work, one acquires not only freedom but strength and self-perfection.

Let us consider the first instinct of the child : he seeks to act alone, *i.e.*, without help from others. His

first conscious act of independence is to defend himself from those who try to help him. And in order to act by himself, he tries to make an ever greater effort. If, as many of us think, the best idea of well-being is to sit down, do nothing and let other people work for us, then the ideal state would be that of the child before birth. The child might as well go back to the body of the mother, because the mother would do everything for the child. If we think so, why should one learn a language in order to communicate with others? No, nature has other intentions. She forces the child to make this difficult conquest of language so that he can enter into communication with other beings. Or again, if we adopted rest as the ideal of life, then the child might say: "I have nice sweet milk from my mother. It is easily digestible. Why should I want any other food? I shall stick to it. Why should I have to take the trouble of chewing coarser food that I have to secure for myself? No! No! I am going to stick to mother's milk." Or again: "Why walk? Somebody carries me in her arms. I have something like an automobile of my own. See the tremendous effort I must make in order to walk, I have to develop my bones, my brain and even finish the insulation of the nerves in the spinal chord. Why should I go to all this trouble? Why should I be so uncouth and bad-mannered as to insist upon knowing things for myself? Why, when there are so many wise people around me, people who have instruction and culture and

who can tell me things ?" But the reality shown by the child is not so. The child reveals that nature's teachings are quite different from the ideals that society has forged for itself. The child seeks independence through work : independence of body and of mind. The child seems to say : " I do not mind how much you know, I want to know things for myself. I want to have experience in the world and to perceive it with my own effort ; you keep your own knowledge and let me acquire mine." We must understand clearly that when we give freedom and independence to the child, we give freedom to a worker who is impelled to act and who cannot live except by his work and his activity. This is the form of existence for living beings, and as the human being is also living, he also has this tendency. And if we try to stop it then, we produce a degeneration in the individual.

Everything in creation is activity and in life this is all the more so. Life is activity and it is only through activity that perfection of life can be sought and found. The social aspirations that have come to us through the experience of past generations : an ideal life of less hours of work, of people working for us, of idling as long as we can, is what nature shows as the characteristic of a degenerate child. These aspirations are the characteristics of regression of the child who was not helped in the first days of its life to adapt itself and who has acquired a disgust for the environment and for activity. He it is who wants to be helped by other people, who wants to

have servants, wants to be carried or driven in a perambulator, who sleeps too long, who shuns the company of other people. These are the characteristics that nature has shown as belonging to degeneration. These are the characteristics which have been recognized, analysed and described as the tendency to go back to embryonic life. He who is born and grows normally goes towards independence. The one who shuns it is degenerate.

Quite another problem of education faces us in these degenerate children. How to cure regression ? Regressions retard or deviate normal development. The deviated child has no love for the environment, because the environment presents too many difficulties, too much resistance. Today the deviated child holds the centre in the scientific field of psychology which we could better call 'psycho-pathology.' Pedagogy teaches that the environment must offer the least resistance. It is sought, therefore, to diminish the avoidable obstacles and resistance that the environment presents to the child, and, if possible, to eliminate them altogether. Nowadays we try to give attraction to the environment. The environment must be rendered pleasing, beautiful, because it is necessary, especially in the case of one who feels repulsion for the environment to arouse sympathy and benevolence towards it. The environment must be made as attractive as possible so as to overcome diffidence and disgust. We must give pleasant activity to the child, because we know that it is through activity

that development takes place. The environment must contain plenty of motives for interesting activity which are an invitation for the child to carry out his experiences upon the environment. These are clear principles for the deviated child, principles which are dictated by life, by nature, and which bring those who have acquired regressive characteristics from the tendency to idle to the desire of working, from lethargy and sluggishness to activity, from that state of fright which sometimes translates itself into attachment to somebody whom they never want to leave, into a freedom of joy, freedom to go towards the conquest of life.

From inertia to work ! That is the path of the cure just as from inertia to work is the path of development for the normal child. If a new education is to be envisaged, this must be its basis, for it has been formulated by nature herself.

CHAPTER IX

CARE TO BE TAKEN AT LIFE'S BEGINNING

THE absorbent mind of the child orients itself in the environment; so it is necessary to prepare the environment with much care.

We must remember that there are different periods of development in the life of the child. One period is soon after birth, and this is so important a period that it is impossible to deal with it in a book as short as this. I feel that in the future there will be people who will specialize in this type of study, at present there are only very few.

If we study the animals we shall see that nature has provided special protection to the mammals, giving special care at this period. Nature has arranged that mothers isolate themselves from the rest of their species just before the time when they give birth to their little ones and they remain isolated for some time before coming back. This is very evident in animals who live in herds or packs. Horses do this, cows do, elephants, wolves, deer, dogs, all do this. During this time the

little new-born animal has time to adapt itself to the new environment, alone, except for its mother's love, watchful guidance and care. In this period the baby-animal gradually expresses the behaviour of its kind. During this short period of isolation there is a continued psychological reaction on the part of the little one to all the stimuli of the environment, and that reaction is according to the special features of the behaviour of its kind. So that, when the mother returns to the herd with her baby, the little one enters the community with its own special preparation for living there already established. It is either a little horse, psychically speaking, or a little wolf, or a little cow, psychically not merely physically.

The child has no fixed behaviour, but he has to take in the environment, therefore it is necessary to take special care of the environment which surrounds this new-born child. This care is of utmost importance in order to aid the absorption of the environment, so that the child may feel attracted towards it instead of repelled, and does not develop phenomena of regression. The progress, growth and development of the child depend on his love for the environment ; we must therefore take care that he can absorb it with interest. Science nowadays takes this into great consideration. Without entering into too many details we can enunciate certain principles. The child should remain as much as possible in contact with his mother and the environment must not present obstacles,

such as great differences of temperature from that to which the child has been accustomed before birth. Not too much light, not too much noise, for the child has come from a place of perfect silence and darkness. Today, in the modern Nursing Homes, the mother and child are placed in a glass-walled room where the temperature is easily controllable, so that it may be gradually assimilated to that of the normal temperature outside. The glass is blue so that the light entering the room is very subdued, and the air also is regulated. Care should also be taken in the way how the child is handled and moved. It has been customary to handle the child as if it were an object without feelings, and it was plunged into a low bath and rapidly and roughly dressed (roughly in the sense that any handling of a new-born child is rough, because it is so delicate a thing, psychically as well as physically). Today science has come to the conclusion that the new-born child should be touched as little as possible, and should not be dressed, but rather kept in a room the temperature of which is sufficient to keep the baby warm and free from draughts of cold air. The way of transporting the baby is also changed : he is carried by means of a soft mattress, something like a hammock, so that he remains in a level and horizontal position, similar to his pre-natal position. He is not lifted up or down but treated as we treat wounded people who need great care. Sick people today are not lifted up and then taken to a cart and drawn along ; there is a stretcher which is at the

same level as the bed, and the invalid is carried very, very carefully, so that there are no bumps and jumps. This is done for adult people. The tendency today is to give the baby the same care and consideration, only even more refined and perfect. This is more than merely hygienic care, because hygiene is something else again. Today the nurses of the child have a cloth in front of their mouth and nose, so that microbes from them may not enter the environment of the new-born child. He is protected from them. Nowadays mother and child are considered as two organs of one body which are in communication. The adaptation to the environment then takes place successfully and naturally for the child, since mother and child have a special connection with each other. It is considered as a kind of magnetism. There are certain forces within the mother to which the child is accustomed and these forces are a necessary aid for the child during the first difficult days of adaptation. We can say that the child has changed his position in relation to the mother. He is now outside the mother's body whereas before he was inside, but the rest is the same. They are still in close communication and this magnetism that goes from the mother to the child remains intact. This is how these things are considered in our modern times, but only a few years ago the first thing that was done at birth, even in the best Nursing Homes, was to separate the mother from the child. The child was taken away and bathed and then brought back to his mother. The

treatment I have described above is the 'last word' in the scientific treatment of the child. Nature shows us that this special care is not necessary to the child during the whole period of childhood. Just as, after a time, the mother cat brings her kittens out and does not hide them any more, so after a little time the human baby and mother can come out of their isolation into to the social world.

Usually, as soon as a baby is born, all the relatives go and see this baby. They pat him and say : "How beautiful he is, he looks just like the father (or mother, or both !)". They kiss it and caress it. This should be stopped. The richer the children the more unhappy they often are, the unhappiest of all are perhaps the king's children. In olden times, when the queen gave birth to an heir to the throne, the king himself took the baby out on to a balcony. The little one was wrapped in a bundle of clothes, and shown to the people who were assembled in the square outside the palace. Imagine this and how it would give rise to regressions !

It is interesting to note that the social questions of the child are not the same as those of the adult. We might say also that the economic position has a bearing upon the child which is the reverse of that which it has upon the adult, for we find that while among the adults it is the poor who suffer, amongst the children it is often the rich who suffer most. It is among the rich that the mother gives the child to a nurse for care, while the poor mother follows

the proper method of keeping her child with her. The children of working mothers also usually receive more substantial food from their mothers, because the mothers are healthy and produce more milk which is of a more substantial quality than that of rich mothers, who do not need to work and are often inert and so their milk is scarce and poor in quality. This is one of the main reasons why a child is given to a nurse. The mother does not feed the child owing to unsuitable milk, and in olden times the baby was given to a 'wet nurse,' who was a healthy peasant woman with plenty of good milk. There is therefore not a general question of rich and poor; in the world of children things and values change altogether.

Once this first period is passed the child adapts himself happily to the environment without feeling any repugnance. Then he begins travelling on the path of independence that we have described, on which the child, we might say, opens its arms to the environment, receives the environment and absorbs it to the extent of making his own, the customs of the environment in which he lives.

The first activity in this development, which we might call a conquest, is the activity of the senses. Owing to the lack of completeness in its bony tissues, the child is inert, without movement of limbs, so his activity cannot be that of movement. His activity is purely that of the psyche taking in the impressions of the senses.

The child's eyes are very active, but we must have very clear in our minds that (as science has described in modern times) the child is not merely struck by the light on its eyes. The child is not passive. He certainly receives impressions, but he is also an active research-worker in the environment. This is the new idea ; it is he, the child, who *seeks* these impressions ; he is not a victim of impressions that are all around him and that strike him, but he seeks them.

Now, if we look at the animal species, we see that they have a type of apparatus in the eyes similar to that which we have, a sort of photographic machine. But these animals are specialized in their use of it : they are attracted towards certain things more than others so that they are not struck by the whole of the environment. They have a guide in them that makes them follow certain lines and through their eyes they follow that guide of their behaviour. So they direct themselves towards those things for which their behaviour is made. From the very beginning there is a guide ; the senses perfect themselves and are then used always following this guide. The eye of the cat will perfect itself in the dim light of the night (as does that of other nocturnal prowlers), but the cat, although interested in the darkness, is attracted by moving things and not by still things. As soon as something moves in the darkness, the cat pounces upon it ; to the rest of the environment it pays no attention. There is not a general awareness of the environment, therefore,

but an instinctive move towards specialized things. In the same way, there are insects which are attracted by flowers of special colours, because in the flowers of those colours they find their food. Now, an insect just emerged from a chrysalis could not have any experience along that line ; it has a guide which directs it and the eye serves to follow that guide. Through this guide the behaviour of the species is realized. The individual, therefore, is not the victim of his senses, neither is it dragged by them ; the senses are there and work in the service of their owner, following a guide.

The child has a special faculty. His senses are not limited like those of animals, but his senses also are in the service of a guide. The cat is limited to things that move in the environment, it is attracted only by them. The child has no such limitation. The child observes his surroundings and experience has shown us that his tendency is to take in everything. He does not merely take them in by means of his camera-like eye, but a kind of psycho-chemical reaction takes place so that these impressions form an integral part of his psyche. We might make this observation—which is an impression and not a scientific statement—that the person who is merely dragged by his senses, who is the victim of his senses, has something wrong within him. His guide may be there, but instead of acting it has become enfeebled in some way and so the person becomes the victim of his senses. Therefore it is of the utmost importance that the

guide which is within each child should be taken care of and kept alive.

To make clearer what happens in this absorption of the environment, I would like to make a comparison. There are certain insects who resemble leaves and others resembling sticks. These insects can be quoted as analogies to what takes place in the psyche of the child. They live on sticks and leaves and resemble them so closely that they have become as one with their environment. Something like that happens in the child. He takes the environment in and transforms himself accordingly like leaf-insects or stick-insects. This is very interesting indeed ! The impressions that the environment gives to them are so great that some biological or psycho-chemical transformation makes them resemble their environment. They become like the thing they love. This power of taking in the environment and transforming accordingly, is now discovered to exist in all types of life, in some physically as in the insects mentioned and in some other animals, but *psychically* in the child. It is to be considered as one of the greatest activities of life. The child does not look at things as we do. We may look at a house and say : " How beautiful ! " and then we see something else and we have but a vague memory of those things afterwards. But the child constructs himself by means of the profound way in which he gathers them especially in the first period of life. It is in infancy, by virtue of the unique powers of infancy, that the child acquires the human characteristics

that distinguish him, such as language, religion, racial character, etc. Thus he constructs the adaptation to the environment. In that environment he is happy and develops taking in its customs, language, etc. He does not refuse food if the word for food differs from that in his own country. He constructs an adaptation to each new environment. What does it mean to build up adaptation ? It means to transform oneself so that one becomes suited to one's environment, so that this environment forms a part of oneself. We must therefore observe these facts as the child absorbs his environment.

The child is in need of an environment in order to develop himself. Having accepted that, the next point is, what are we to do ? What sort of environment must be prepared for the child so that it may be of assistance to him ? It is a very embarrassing question. If we were dealing with a child of three years, he might be able to tell us. We should have to put flowers and beauty in the environment ; we should have to provide those motives of activity which belong to his path of development. We could easily find out that certain motives of activity would have to be in the environment in order to offer an opportunity for functional exercise to this child. But when the baby has to take in the environment in order to build up adaptation, what sort of environment can we prepare for him ? There can be but one answer to this : the environment for the baby-child must be the world, the world that is around him, all of it ! It is

evident that if the child is to acquire language, he must be among people who speak, otherwise he will not be able to do so ; if he is to acquire any powers or faculties he must be among people who habitually use those powers and faculties. If the child is to take in customs and habits he must be constantly among people who themselves follow them. That is why we find that the child who is among cultured people who use many words and many small refinements of behaviour, acquires many more words and many more little refinements than the less fortunate child.

This really is a strikingly revolutionary statement. It is a contradiction of what has happened in the last few years, since, as a consequence of hygienic reasoning, people have come to the conclusion—or misconclusion —that the child should be isolated ! What has happened is that the child has been placed in a nursery. When it was discovered that the nursery, hygienically speaking, was not good enough, the hospital was taken as a model and the child was left undisturbed and made to sleep as much as possible like a sick person. Let us realize that if this is progress—this exclusively hygienic care—it is a social danger. If the child is kept in nurseries, in a sort of prison, with as his sole companion a nurse who obstructs more or less the development of the child, because no expressions of truly maternal sentiment or feeling are shown to the child, there are serious obstacles to normal growth and development ; serious retardation and dissatisfaction, one

might say psychic hunger on the part of the child, is bound to result with harmful effect. Instead of staying with his mother, who loves him and with whom there is a special current of communication, the child has a nurse who does not speak much to the child because of the hygienic habit of covering her mouth. How then can he learn the language ? He must be protected from the sun or cold so a hood is put up over his perambulator and he sees only the face of the nurse or the hood and is shut away from all other parts of the environment. The richer the children the worse their lot, because this is life in a prison for them. Instead of nice beautiful mothers they have nurses, sometimes very experienced, but then old and ugly and the more aristocratic the family, the more formal it is and the parents see still less of the child. Many families see their child for a moment once a week because 'the nurse knows how to deal with the child.' Mother says : "I do not deal with him". After that period, they put the child in a boarding school !

The treatment of the child is really a social question and today more and more we begin to realize that it must be changed. Once this has been understood people begin to worry very much as in America which is awake now to the need for this new sort of aid to the child. They study how the child should be treated, and there is a growing conviction that as soon as the child can come out of doors, one should bring him along in the midst of one's work and allow him to see as much as possible.

Then the perambulator is built very high, because the higher the child the better he can see. The nursery also has undergone a transformation. It conforms as rigorously to the requirements of hygiene as a hospital room, but the walls are full of pictures and the child lies on a stand which is slightly sloping and fitted high up, so that he can command a view of the whole of the environment and not of the ceiling only. This is the first throne for the child. The idea has been understood that the child must be placed in a position to see everything.

The absorption of language presents a more difficult problem especially to nurses who themselves belong to a social environment different from that of the child. Here also there is another side to the question. The child must be brought with us when we converse with our friends. Usually when we go to call on a friend or when a friend comes to see us, the child is taken away and put back in the nursery. If we want to aid the child we must put him in our midst so that he can see how we do things and can hear the conversation. He does not register it consciously, but if he sees the people round him talking, eating, etc., he receives a sub-conscious impression that he takes in and this will help his growth. Also when we take him for an outing what will *he* like? We cannot say so definitely, but we can observe him. Here again mothers and rightly prepared nurses, when they see the child interested in something, will stop and let the child examine and inspect it as long as he likes. The nurse,

instead of dragging along a cart with something in it as she used to do in the old days, considers the *child* and the little face lights up with interest as he is allowed to examine what attracts him. How, indeed, can we know what is going to be of interest to the child on any particular day? We must be at his service. Our whole conception is therefore revolutionized, and this revolution must be brought about among adults. The adult world must realize that the child constructs a vital adaptation to the environment and must therefore have full, complete contact with the environment, for if the child is unable to construct this adaptation, we face a social problem of the first order. All the social problems we have today are due to a lack of adaptation on the part of somebody, either in the moral field or in others. This is a fundamental problem, a question of fundamental importance. This conclusion, of course, points to the fact that the education of the small child will in the future become the most basic and important consideration of society.

Then how is it possible that we knew nothing of it before? Our grandparents and great-grandparents knew nothing of these things and yet children grew up and humanity existed. This is the sort of statement that usually comes into the mind of a person who hears something new! They say: "Humanity is very old and people must have lived. I have grown up myself; my children have grown up and yet we had no such theory before. In spite of the lack of such preparation, people

have acquired their language and in many countries certain customs have become so strong that they have become prejudices. How has that taken place ? How is it that without any such preparation I have become one of my race ? "

Let us consider this question for a little while. One of the most interesting studies is the study of the behaviour of human groups at different levels of civilization. Every one seems more intelligent than we in the West with our ultra-modern ideas ! In most other countries we see that children are not treated as disastrously as by the rich ultra-modern Westerner. We see that in most countries the child accompanies his mother everywhere. The mother and child are as one body. Wherever the mother goes the child goes with her. In the street she talks and the child listens. The mother has an altercation with some tradesman about prices, the child is present. Whatever the mother does the child sees and hears, and for how long does that last ? During the whole period of breast-feeding. The mother has to feed her child and so as she goes to work or goes out she cannot leave the child. To her it is not merely a question of feeding the child, it is really a question of attraction between the mother and child. " I do not like to leave the child, because I love him," she would say. Nature has arranged that milk and love solve the problem of adaptation to the environment on the part of the child. So here is the picture : the mother and child are but one

person divided into two. Where civilization has not destroyed the possibility, the mother loves the child and takes him about with her, everywhere. She says, and rightly : " I do not trust anyone with my child." Is this mother a gaoler then ? No ! She goes everywhere and so does the child. The child hears the mother speaking in a normal way to many people. She speaks whatever she has to say and the child takes part. People say that mothers are loquacious ; yes, because they have to aid the development of the child and his adaptation to his environment. If the child were to hear only the words that the mother addresses to himself, he would not learn much. Instead, the child learns language in its construction. It is not language consisting only of disconnected words, it is language taken from the people who speak. It is really marvellous that the child is able to absorb the language of the environment in which he lives, but this can only happen if he *lives among people.* Therefore I stress the necessity of the child being brought out into the world.

Again, if we study the different human groups, races or nations, there are other characteristics to observe : the fashion of transporting the child is one of these characteristics. Ethnological studies are made and people go about observing these and other customs and there are many interesting things to be seen. One of the greatest interest is to see how women carry their children. They usually lay the child on a bed or in a bag and do

not carry him in their arms. In some countries the child is fastened to a piece of wood and put on the shoulders of the mother, when the mother goes to work. Certain people tie the child on the neck, others on the back, others use a basket. But each race has found some means of carrying the child along. There is always the question of breathing to consider. The child is usually carried with his face against the back of the mother, there is the danger of suffocation to be considered, and so precautions are taken. The Japanese put their children in such a way that the neck of the child comes above the shoulder of the person who is carrying it, and the first traveller who went to Japan, called the Japanese two-headed people, on account of this habit. In India the child is carried on the hip, and the Red Indian straps it on the back ; the child is in a sort of cradle and is fastened to the mother back to back, so that the child sees whatever is behind her. Each country has different habits and customs, but the child never leaves the mother. It never enters the head of the mother to leave the child behind any more than she would leave her hair behind. In Africa among a certain tribe there was to be a coronation ceremony for a queen. To the surprise of the missionaries who witnessed the ceremony, the queen had her child along with her. It never entered her head to leave the child at home. Another curious fact with these people is that the period of breast-feeding lasts for a long period. In some countries it lasts one year, in

others one and a half or up to two years. It is not necessary, because the child has the necessary means now to eat anything. In fact he does eat a great many things besides drinking his mother's milk, but since the mother continues to feed him, it means that she takes the child along with her and so involuntarily ensures the proper aid of a full social environment during this important period. The mother says nothing to the child but he has his eyes and he goes about. The mother carries him and the child comes to know people in the street and the market, carts and buses. He sees all these things without anybody telling him anything. And when mothers go to market and fix the price for fruits, if you look at the face of the child she carries, it is curious to see the intensity of interest there is in his eyes. The mother is unexpressive in her face but the child is intensely expressive. Another interesting factor is that the small child who is being carried about never cries, unless he is ill or wounded. Sometimes the child falls asleep, but he never cries. Among the enormous quantity of photographs taken in these countries, you never see a child crying. The photographs have been taken of the mother, of course, to show her customs, but incidentally we notice that one feature of them is that the child does not cry, whereas what people complain about in Western countries is: "My child is always crying," and "what do you do when a child cries?" What can one do? Crying is the problem in Western countries. Today the answer of psychologists

is this : the child cries and is agitated, he has fits of crying and 'tempers', because he suffers from mental starvation. He is mentally undernourished. He is kept in prison with a restricting guardian over him. The only remedy is this : to take the child out of prison and allow him to go into society. What nature shows us is this treatment of the child which is unconsciously followed in many races. This treatment has to be understood and applied *consciously* by us as we use our observation and intelligence.

CHAPTER X

ON LANGUAGE

LET us consider the development of language in the child. In order to understand language, we must reflect on what language is. It is so fundamental that we might well call it the basis of normal human life, because through it men join together to form a group. It brings about the transformation of the environment that we call civilization.

There is a central point that distinguishes humanity: it is not guided to do this or that fixed task as animals are. We never know what man will do, hence men must come into harmony with each other or they will never do anything. In order to come into accord and to take intelligent decisions together, it is not sufficient to think, not even if all of us were geniuses. What *is* necessary is that we must understand one another. This understanding one another is possible only by means of language. Language is the instrument of thinking together. Language did not not exist on the earth until man made his appearance. Yet after all, what is it? A mere breath,

a series of sounds put together not even logically, just put together.

Sounds have no logic, the collection of sounds that occur when we say 'plate' have in themselves no logic. What gives sense to these sounds is the fact that men have agreed that those special sounds shall represent this special idea. Language is the expression of agreement among a group of men, and it is only *the group who has agreed* on those sounds who can understand them. Other groups have other sounds to represent the same idea. Language is a sort of wall that encloses a group of men and separates it from other groups. That is why language has become almost mystical, it is something that unites groups of men even more than the ideas of nationality. Men are united by language, and language has become more complicated as man's thought has become more complicated; it has grown with man's thought.

The curious thing is that the sounds used to compose words are few, yet they can unite in so many ways to make so many words. How complicated are the combinations of these sounds! Sometimes one is placed before another, sometimes after another, sometimes softly, sometimes with force, with closed lips, with open lips, etc., etc. It needs a great memory to remember them all and the ideas represented by these words. Then there is the thought itself, as a whole, which must be expressed and this is done by a group of words which we

call a sentence. The words must be placed in a special order in that sentence so as to conform to the thought of man and not just to string together a number of things in the environment. There is therefore a set of rules in order to guide the hearer as to the intentional thought of the speaker. If man wishes to express a thought, he must put the name of the object here and an adjective near it and another noun there. The number of words used is not sufficient, their position must be considered. If we want to test this, let us take a sentence with a clear meaning, write it out, cut the written sentence into its separate words and mix them ; the sentence will not make sense, yet there are exactly the same words. So here also there must be agreement among men. Language therefore might be called the expression of a supra-intelligence. On first consideration we feel that language is a faculty with which we are endowed by nature, but after further thought we realize that it is above nature. It is a supra-natural creation produced by conscious collective intelligence. Around it there grows a sort of network that extends and increases and there is no limit to the extension and increase, so that there have been languages so complicated, so difficult to remember for ever, that they have died. They extended so far and gradually became so complicated that it was impossible to retain them, and they disintegrated. And if one wished to study Sanskrit or Latin one would study for eight years, ten years, and even then one would not

succeed in speaking this language completely and in its perfection.

There is nothing more mysterious than the underlying reality that to do anything, men must come together in agreement and to that they must use language, this most abstract instrument.

This problem is always worrying humanity, but it *must* be solved, because language has to be given to the new-born child. Attention to this problem has led people to consider and realize that it is the *child* who takes in language. The reality of this absorption is something very great and mysterious which men have not sufficiently considered. It is said : " Children are among people who speak, so they speak". This is a very profound statement indeed ! especially when one considers the complications. Yet people have gone on for thousands of years to think of it so superficially.

Another thought has entered men's minds through their study of this problem of language ; a language might be difficult and complicated for us to learn and yet it has been spoken once by the uncultured people of the country to which it belonged. Latin is a difficult language, even for those who speak the modern languages that have developed from Latin, but the language that the slaves of imperial Rome spoke was this same complicated and difficult Latin ! And what did the uncultured peasants speak as they laboured in the fields ? This complicated Latin ! And what did the children of three years speak

in imperial Rome ? They expressed themselves in this complicated Latin and understood it as it was spoken to them. It is probably the same in India. Long ago, the people who worked in the fields and roamed in the jungle spoke Sanskrit. To-day this mystery has aroused curiosity and the result is that the development of language in children is receiving attention and, let us remember, it is *development, not teaching.* The mother does not teach language to her little one. Language develops naturally as a spontaneous creation. And what strikes one is that language develops following certain laws and in certain epochs that development reaches a certain height. This is true for all children whether the language of their race be simple or complicated. Even today there are some very simple languages spoken among certain primitive people ; the children who live among them attain the same development in their language as the children with a more difficult language do. There is a period for all children when only syllables are spoken ; then words are spoken and finally the whole syntax and grammar is used in its perfection. The differences of masculine and feminine, of singular and plural, of tenses, of prefixes and suffixes, all are used by children. The language may be complicated and with many exceptions to the rules, yet the child who absorbs it learns it all and can use it in the same time as the African child learns the few words of his primitive language.

If we look at the production of the different sounds we also find it follows laws. All the sounds which compose words are made by putting into use certain mechanisms. Sometimes the nose is employed together with the throat, and sometimes it is necessary to control the muscles of the tongue and cheek, etc. Different parts of the body come together to construct this mechanism. Its construction is perfect in the mother tongue, the language taken by the child. Of a foreign tongue, we adults cannot even hear all the sounds, let alone reproduce them. We can only use the mechanism of our own language. Only the child can construct the mechanism of language, and he can speak any number of languages perfectly if they are in his environment.

This construction is not the result of conscious work, but takes place in the deepest layer of the sub-conscious of the child. He begins this work in the darkness of the sub-conscious and it is there that it develops and fixes itself as a permanent acquisition. It is this that lends interest to the study of language. We, adults, can conceive only a conscious wish to learn a language and set about to learn it consciously. We must however have another conception of a natural, or rather supra-natural mechanism that takes place outside of consciousness, and this mechanism, or series of mechanisms, is fascinating. They take place in a depth not directly accessible to adult observers. Only the external manifestations can be seen, but these are very clear in themselves if we

observe them properly, since they take place in all humanity. Especially striking is the fact that the sounds of any language keep their purity age after age ; another curiosity is that complications are taken in as easily as simplicities. No child becomes 'tired' of learning his mother tongue, his mechanism elaborates his language in its totality.

There comes to my mind a sort of comparison to this absorption of language by the child. My idea has nothing to do with the various factors of the phenomenon, nor with reality, but it gives a picture of something similar that we can experience. If, for instance, we wish to draw something, we take a pencil or colours and draw it, but we can also take a photographic picture of the thing and then the mechanism is different. The photograph of a person is taken on a film. This film does not have to do much work, and if there were instead of one a group of ten people to be photographed, the film would have no more work than before ; the mechanism works instantaneously. It would be just as easy to take a thousand people if the camera were large enough. If we photograph the title of a book, or if we photograph a page of that book filled with minute or foreign characters, the effort is the same for the film. So the mechanism of the film can take in anything, simple or complicated, in the fraction of a second. Whereas, if we have to draw a man it will take some time, and if we have to draw ten men it will take more time. If we copy the title of a book

it will also take some time, if we have to copy a page of minute and foreign characters it will take much more time.

Then, too, the photograph is taken in darkness and still in darkness it undergoes the process of development, then it is fixed, still in darkness, and finally it can come to the light and is *unalterable*. So it is with the psychic mechanism for language in the child. It begins deep down in the darkness of the sub-conscious, is developed and fixed there, and then it is seen openly. Certain it is that some mechanism *does* exist, (whether I have made a good comparison or not) so that this understanding of language may be realized. Once one has envisaged this mysterious activity, one wants to find out how it happens ; so there is today a deep interest in the investigation of this mysterious feature of the deep subconscious.

This however is only part of the activity of observation that adults can perform ; the other part is to watch the external manifestations, because it is only of these external manifestations that we can have proof ; but this observation must be exact. Nowadays several people are engaged in this. Observations have been carried out day by day from the date of birth to two years of age and beyond : what happened on each day, how long the development remained at the same level, etc. From these observations certain things stand out like milestones. They have revealed the fact that there is a mysterious

inner development that is very great, while the corresponding external manifestation is very small, so there is evidently a great disproportion between the activity of the inner life and the external expression. Another thing that stands out in all these observations of outer manifestations is that there is not a regular linear development, but development manifests itself in jerks. There is the conquest of syllables, for instance, at a certain time and then for months the child emits nothing but syllables—there is no progress externally. Then suddenly he says a word ; then he remains with one or two words for a long time. Again there seems no progress and one feels almost disheartened to see this slow external progress. It seems so sluggish, but the acts reveal to us that in the inner life there is a continuous and great progress.

After all is this not illustrated also in the actions of society ? If we look at history, we see that man for centuries lived at the same level, primitive, stupid, conservative, incapable of progress ; but this is only the outer manifestation seen in history. There is an inner growth going on and on, until an explosion suddenly comes ! And then another period of placidity and little progress externally and then another revelation !

So it is with the child and this language of man. There is not merely small steady progress of word by word, but there are also explosive phenomena, as psychologists call them, happening without reason or teaching. At the

same period of life in each child comes suddenly this cataract of words, and all pronounced perfectly. In three months the children use with ease all the complications of nouns, suffixes and prefixes, and verbs. All this happens at the end of the second year for every child. So we must be heartened by this action of the child and wait. (And at the sluggish epochs in history we may hope for the same ; perhaps humanity is not so stupid as it appears, perhaps wonderful things will happen which will be explosions of internal life.) These explosive phenomena and eruptions of expression continue after the age of two years ; the use of simple and compound sentences, the use of the verb in all its tenses and modes, even in the subjunctive, the use of subordinate and co-ordinate clauses appear in the same sudden explosive way. So is completed the expression of the language of the group (race, social level, etc.,) to which the child belongs. This treasure which has been prepared by the sub-conscious is handed over to the consciousness, and the child, in full possession of this new power, talks, and talks, and talks, till the adults say : " For goodness' sake can't you stop talking ! "

After this great landmark at two and a half years, which seems to indicate a border-line of intelligence when man is formed, language still continues to develop, without explosions, yet with great vivacity and spontaneity. This second period lasts from two and a half to four and a half or five years. This is the period when the child

takes in a great number of words, and perfects the rendering of sentences. Certainly if the child is in an environment of a few words or of 'slang', he will use those words only, but if he lives in an environment of cultured speech and rich vocabulary, the child will fix it all. The environment is very important, yet in any case an enrichment of vocabulary will come about. Great interest is being taken in this fact. In Belgium scientific observers discovered that the child of only two and a half years knew two hundred words, but by the time of five years he knew and used thousands of words, and all this happens without a teacher ; it is a spontaneous acquisition. After he has learnt all this, we allow the child to come to school and say : " I will teach you the alphabet ! "

We must keep clearly in mind this double path that has been followed : that of the sub-conscious activity which prepares the language, and then that of the consciousness gradually coming to life and taking from the sub-conscious what it has to give. And what have we at the end ? MAN—the child of five—who can speak his language well, knows and uses all the rules. He does not realize all the sub-conscious work, but in reality he is MAN who has created language. The child has created it for himself. If the child did not have these powers and did not spontaneously acquire language, there would have been no work possible in the world of men and no civilization. We see, therefore, how important is MAN in this period of

his life : *he constructs all.* If it were not for him, civilization would not exist, for he alone constructs its foundation. So we should give him the help he needs and not leave him to wander alone.

CHAPTER XI

THE CALL OF LANGUAGE

WHAT I want to illustrate is a fact that will arouse little sympathy, I am afraid, because we human adults think we are above mechanisms and live in the abstract. How interesting however are these wonderful mechanisms. Mechanisms are basical things, they are material facts. Material things are not only flesh and blood, but also mechanisms. All know that in the mechanism of the nervous system there are the sense-organs, the nerves and nerve-centres, and the motor organs. The fact that there is a mechanism concerning language goes somewhat beyond such material facts. It was towards the end of the last century that the brain-centres which deal with language were discovered. There are in the cortex of the brain two special centres dealing with language : one is the centre for *heard* language, auditory receptive speech, and one the centre for the *production* of language, that is of spoken, motor speech. If we consider the question from the physiological point of view, there are also two organic centres : one for hearing the language

(the ear) and one for speaking the language (the mouth, throat and nose, etc.), and these two centres develop separately, both psychically and physiologically. The receptive or hearing centre is in relation with that mysterious side of the psyche in which language is developed in the deepest part of the sub-conscious, and the activity of the motor centre is manifested when we speak.

It is evident that this second part, which deals with the movements necessary for the emission of language, is slower to develop, and is manifested after the other. Why ? Because it is the sounds *heard* by the child that *provoke* those delicate movements which *produce* sound. This is very logical, because if humanity does not have a pre-established language (which it does not, considering that it creates its own), then it is necessary that the child first hears the sounds of his group's created language before he can reproduce them. Therefore the movement for reproducing sounds must be based on a sub-stratum of impressions on the psyche, on those sounds, because it is on the sounds which have been *felt* (impressed on the psyche) that movement depends.

This is easy and logical to understand, but it has not come because of logic, but because of a mechanism in nature. And what logic is there in nature ? In nature one first notices *facts* and after seeing them, one says : " How logical they are !" and then, " There must be a directing intelligence behind the facts ". The mysterious intelligence which acts in the creation of things is much

more visible here in the psychic phenomena than it is in flowers even, with all their beautiful colours and shapes.

It is clear that at birth, these two activities of the heard and the spoken language do not exist. What does exist then? Nothing exists, yet at the same time everything is there. What exists are these two centres, centres free of all sound and of all heredity yet capable of taking in language, and of elaborating the movements necessary for its emission. These two points are part of the mechanism for developing language in its totality. Going more deeply into the matter we see that both a sensibility and an ability exist which are centralized. It is easy to see also that the elaboration of language begins after birth, since it depends on the hearing of language and before birth the child cannot hear anything. Activity must come afterwards. It is marvellous that all is prepared so that, when the child is born, it can start on its work.

Now let us study the organs as well as the mechanism. Certainly the creation of this mechanism is marvellous, but all creation is marvellous. Is it not marvellous to think of the creation of the ear (the organ of heard language) before the child is born? There, in that mysterious environment, this very delicate and complicated instrument has developed spontaneously. How marvellously is it constructed, as if some musical genius had built it up. A musician, yes, because the central part of the ear is a sort of harp, with the possibility of vibrating with different sounds according to the length of the

' strings '. The harp in our ear has sixty-four ' strings ', all placed in gradation and as the size of the ear is so small they have been arranged in the form of a snail's shell. What intelligence ! Respecting the limits of space, yet building up all that is necessary for musical sounds. And who is going to play on these strings ? For if no one plays on it, the harp may remain silent against the wall for years. We see a drum in front of the harp, and when something touches that drum, one or more of the harp strings vibrate ; so the drum plays the harp and we hear the music of speech. Not all the sounds of the universe are taken in by the ear, because there are only sixty-four strings, but quite a complex music can be played on it. By means of it a language, with all its delicate and fine complications, can be transmitted. And if this complicated instrument has created itself in the mysterious pre-natal life, why should it be that after birth something else is created, *i.e.*, the language that the child finds in his environment and must create for himself ? We shall see.

For the moment let us look at nature ; how marvellous she is, and how quick ! Even if the child is born at seven months, all is complete and ready. Nature is never late ! How does this instrument transmit the sounds it receives through the nervous fibres to the brain, where the special centres are located to collect these special sounds ? That is also mysterious, but these are facts of nature. The curious thing is that psychologists, who have studied

new-born children, say that the sense most sluggish to develop is that of hearing. They say it even seems that the child is deaf. All sorts of noises are made round the child and there is no reaction. This is because these centres are *centres for language, for words*, and it seems as though this powerful mechanism responds and acts only in relation to these special sounds—the spoken word —so that thus, in time, will be produced the mechanism of movement, which will reproduce those same sounds.

If this special isolation of the centres were not provided for, imagine what would happen to man ? If the centres were free to take *anything*, then the child who was born on a farm would be impressed only by the sounds of the farm, and would say : " Moo, Moo " and grunt and cackle. The child born near a station would only make the sounds of the whistling and puffing trains. It is because nature has built and has *isolated* these centres specially for language that man can speak. There have been cases of wolf-children, children who, for one reason or another, have been abandoned in the jungle, and by some wonderful means have managed to live. These children, although they have lived in the midst of all kinds of bird- and animal-sounds, those of water and of falling leaves, have nevertheless remained entirely dumb. They produced no sound whatever, because they did not hear the sounds of human speech, which alone provoke the mechanism of spoken language. All this I relate to show that there is a special mechanism for language. This

distinguishes humanity, it possesses this mechanism ; not to possess language, but to possess this mechanism for creating its own language characterizes humanity. Words are the result of a sort of elaboration performed by the child, but the child himself is not a mechanism, far from it.

Let us imagine the ego in this mysterious period, just after birth, as a sleeping self. This sleeping ego suddenly wakes up and hears a delightful music. If this mysterious ego could talk, it would say : " I have entered the world, and they have welcomed me with music, a music, so divine, so soul-penetrating, that my whole being, my very fibres have begun to vibrate to it. No other sound reached me, because this reached my soul and I heard no other sound but this divine call ! " And if we remember the great propulsive powers which create and conserve life, we can see how this music produces a thing that remains everlasting. What takes place in the mneme of the new-born child now, remains for ever. Every group of humanity loves music, creates its own music and its own language. Each group responds to its music with movements of the body and this music attaches itself to words, but those words have no sense in themselves, it is we who give the sense. In India there are many languages, but music unites all. The impressions on the new-born child have remained. There are no animals that make music and dance, but all humanity does it wherever it is.

These sounds of language then are fixed in the sub-conscious. What goes on inside we cannot see, but

the outer manifestations give us a guide. Sounds are fixed and this is an integral part of the mother tongue. We might call it an alphabet. Then syllables come, then words, just spoken as a child will read sometimes from a primer, without knowing what it all means. But how intelligently the child works ! Inside the child himself is a little teacher, like one of the old-fashioned teachers who make the child recite the alphabet, then syllables and finally words. Only the human teacher does it at the wrong time when the child already possesses his language. The teacher inside the child does things at the right time, so the baby fixes sounds, then syllables. It is a gradual construction as logical as the language. Afterwards words come and then we enter the field of grammar. Names of things (nouns) come first. That is why it is so illuminating to follow the teachings of nature, because nature is a teacher, and it teaches the child the most arid part of language. It is a real school with methods. It teaches nouns and adjectives, conjunctions and adverbs, verbs in the infinitive, then the conjugation of verbs, the declensions of nouns, then prefixes and suffixes and all the exceptions. Then there is the examination ; he shows he can use them. We then see what a good teacher there has been and what a diligent pupil, because he uses them all quite correctly in the examination. Isn't he clever ? One should applaud him, but no one takes any notice of him. Much later when he is at the school we adults have chosen for him,

he is given a medal and we say " What a clever teacher he has ".

But it is the small child who is really a living miracle ! This is what the teacher should see in the child : a pupil who has learnt in such a fashion that the teacher herself could not learn better. In two years he has learnt everything ! This is a deep mysterious fact. Let us then follow the manifestations the child gives in these two years, because thus it will be easier to follow what the child has done. On examining these manifestations, we see a gradual and ever-awakening consciousness and then, suddenly, this consciousness becomes predominant and wishes to master all. At four months (some say earlier, and I am inclined to agree with them) the child perceives that this mysterious music that surrounds him and touches him so deeply, comes from the human mouth. It is the mouth (the lips that move) which produces it. This is seldom noticed, but if we watch a baby we see with what intensity he watches the lips. Consciousness is already seen taking a hand in the matter, for consciousness takes a propulsive part in the work. Certainly, movement has been unconsciously prepared, all the exact co-ordinations of minute fibres have not been achieved consciously, but consciousness gives interest, enlivens and makes a series of keen, alert researches.

After two months of this observation of the mouth, the child produces his own sounds (at six months of age).

All of a sudden, this baby, who has been unable to say anything except an occasional interjectional noise, one morning wakes up (before you) and you hear him saying: "Ba-ba-ba", "Ma-ma-ma", etc. It is he who invented 'Papa' and 'Mama'. He now goes on for so long a time with these syllables only that we say he cannot do any more. After a great effort he has reached this. Let us remember, it is the effort of the ego who has made a discovery and is conscious of his powers; a little *man* who is no longer a mechanism, but an individual using mechanisms. We arrive at the end of the first year of life, but before that, at ten months, the child has made another discovery: that this language from the mouth of people has a purpose. It is not merely music. When we say: "Dear little Baby, how sweet you are!", he realizes: "this is meant for *me*" and so he begins to realize there is some purpose in these sounds addressed to him. Two things therefore have happened by the end of the first year: in the depths of the unconscious he has understood: on the heights of consciousness he has created language, though at the moment it is only babbling, just repeating sounds and combinations of sounds.

At one year of age the child says his first *intentional* words. He babbles just the same, but it is intentional, and intention means conscious intelligence. What has happened within? Having studied him we know that he has much more within him than is shown by these unobtrusive manifestations. More and more the child has

realized that language refers to the environment round him and he goes on to the conscious mastery of it. Here a great struggle arises within the child, a struggle of consciousness against mechanism. It is the first struggle of man, it is the first war between the parts ! To illustrate this I can use my own experience. I know many things, I want to express them to an English-speaking audience, but I do not have the language. I only know a little English and my words would be a useless babbling. I know that my audience is intelligent and we could exchange ideas, but, alas, I only babble. This epoch when the intelligence has many ideas and knows people could understand them, but cannot express these ideas through lack of language is a dramatic epoch in the life of the child. It gives the first disappointments of life. If I had no translator, what could I do ? What can the child do ? He goes to school in his subconscious, and his desire spurs him to learn. It is the conscious impulse to be able to express himself that makes this hurried acquisition of language possible. Imagine his attention to language at this time !

A being who is so desirous of expressing himself, needs to go to a teacher to give him the words clearly. Are we any use as such teachers ? No ; we don't help him at all ; we merely repeat to him his own babbling. If he did not have this inner teacher, he would learn nothing at all. It is this inner teacher who makes him go to adult people who are *talking to each other*, not to him.

The impulse forces him to take the language with exactness, but we do not give it. Yet after one year of age he could indeed go to school ; to one of our schools where intelligent people talk to him intelligently. Some people have understood this difficulty of the child between one and two years, and the importance of giving to the child the opportunity of learning exactly. Just a few days before I wrote this, I received a communication from Ceylon in which someone wrote : " How glad we are that there are now schools in our country for our small child !" They have understood the need there. So besides those who say : " What a pity we have no University ! " there are also those who say : " How glad we are to have these schools for small children ! " We must realize that since the child has grammatical knowledge we can talk to him grammatically and help him with the analysis of sentences. The new teachers of children between the ages of one and two years should know the development of language. Mothers must know it, as it is important, and teachers should know it in a scientific fashion. Then the child need not go about to find people talking to others, not to himself, in order to receive the aid he needs. We become the servants of nature that creates, and of nature that teaches, and a whole syllabus and method is ready for us.

What can I do with my babbling if I want to tell something that is very important ? I may not have much self-control, I may become agitated, enraged, and begin

to cry. That is what happens to the child of one or two years. He wants to show by one word what he wants us to know, but he cannot and hence tantrums. Then people say : " See man's innate perversity coming out ! "— (What ! in a man of one year !) The origin of war is there in this child of one year, who gets angry and violent for no reason at all, as we think. We say : " We care for him, we dress him, we do things for him, yet he makes all these naughty scenes ". Poor little man who is working towards independence ! To be so misunderstood ! And yet this poor being who has no language and whose only expression is one of rage, has yet the *power* of making his own language. The rage is merely an expression that comes after the obstructed effort to try to make words, and he *does* make some sort of words.

There is another period at about one and a half years when the child has recognized another fact ; namely, that each object has a name. This is marvellous because it means that among all the words he has heard, he has been able to pick out nouns, especially concrete ones. There was a world of objects, now there are words for these objects. Unfortunately, with nouns alone one cannot express everything, so he has to use one word to express a whole idea. Psychologists therefore give special attention to these words that are meant to express sentences, and they call them fusive words or ' one-word-sentences.' Let us suppose porridge is eaten with milk, the child then may call out : " Ma pa " meaning : " Mother

I am hungry, I want some porridge ". He is expressing one whole sentence in a word. Another feature of this fusive speech, this forced language of the child, is that there are alterations in the words themselves ; there are often abbreviations. A Spanish baby will use 'to' instead of 'paletot' which means 'overcoat'; and 'palda' for 'espalda' which means 'shoulder'. This is a modification, an abbreviation of the words *we* use, and sometimes they are so different that we might say that the child uses a foreign language. There is a 'child-language', but very few take the trouble to study it. Teachers of children of this age, *should* study this in order to help the child and bring calm to his tormented soul.

These two child-words 'to' and 'palda' were the manifestation of a mental conflict in a child, and the child was so enraged and agitated that many people did not know what to do with it. The mother of the child was carrying her coat over her arm and the child was screaming, screaming. At last, at my suggestion, the mother put on her coat and immediately the screaming ceased, the child was calm and crowed happily : "To palda ", meaning to say : " That is right ; a coat is meant to be worn over the shoulders." So you see another fact, that this mysterious language of the child can reveal the psychology of the child at this age, his urge and need for order and his distress at disorder. A coat was not meant to be carried carelessly over the arm ; it was the

wrong place for it, and the disorder was more than the child could bear.

I have another instance, an incident that reveals that a child of one and a half years can understand a whole conversation and the sense of it. Some five people were discussing the merits and demerits of a child's story-book. They had been discussing for some time, and the conversation ended with the remark : " It all ends happily." Immediately the little one, who was in the room, began to shout : " Lola, lola ! " The people thought it wanted its nurse and was calling her by her name. But no ! It became more agitated and cried in distress and rage, not yet self-controlled, and then at last it managed to get hold of the book and turning to the back cover pointed to the picture of the child about whom the story was written, and said again : " Lola, lola ! " The adults had taken the end of the printed story as the end of the book, but for the child the last picture, which was on the back cover, was the end, and in that picture the child was crying : " how could they say it ended happily ? " It had followed the whole conversation, knew it was about that book, and had understood what was said and that a mistake had been made by these adults. Its understanding was complete and detailed, but its speech was not sufficient. It could not even pronounce the correct word for ' cries ' which is ' llora ' in Spanish, so it said ' lola '. The one word ' lola ', was used to tell these adults : " You are wrong ; it does not end happily : he cries."

This illustrates why I say that it is necessary to have a special 'school' for children of the age of one and one and a half years. Mothers, and society in general, must take special care that the children have frequent experiences of the best language. Let the child come with us when we visit our friends and also when we go to meetings, especially where people speak with emphasis and clear enunciation.

CHAPTER XII

OBSTACLES AND THEIR CONSEQUENCES

I NOW wish to deal with certain inner sensitivities, so that we may understand the hidden tendencies of the child. We might compare this to a sort of psycho-analysis of the invisible mind of the child. In Fig. 9. I represent by symbols the language of the child, and that may clarify the idea.

For the symbolic representation of the nouns (names of things) that children use, I have used a black triangle ; for the verbs, a red circle ; and different symbols for other parts of speech. These symbols are shown in Fig. 10. So if we say that the child uses two to three hundred words at a certain age, I represent this by symbols in order to give a visual impression of it. It is then sufficient to have eyes to see the development of language and it does not matter whether we speak English, Gujarati, Tamil, Italian or Spanish, because the symbols for the parts of speech are the same.

All the nebulous patches at the left hand side of the diagram represent the efforts of the child to speak, his first exclamations, interjections, etc. Then we see two

sounds come together and syllables are formed, and then three sounds together and the first words are spoken. A little further to the right of the diagram, we see a grouping of words, some nouns that children use, then two-word phrases (a sentence with diffused meaning), just a few words to mean quite a lot. Then there is a great explosion into words. This is an exact representation of the actual number of words that psychologists have found children to use. At one side of this picture of the explosion we see a patch of words which are nearly all nouns, then next to that, different parts of speech in a confused combination, but soon after two years the next stage is represented, *i.e.*, words in order. There is an explosion of *sentences*. So the first explosion is of words and the second explosion is of thoughts.

There must be a preparation for this. It is hidden, a secret, but though it is secret it is not a hypothesis, because the results indicate efforts. One can realize the great efforts the child has had to make in order to express his thoughts. As adults do not always understand what the child means, at this stage there is the rage and agitation I mentioned before. This agitation forms an integral part of the life of children. All the efforts which the child will carry out, if not crowned with success, will produce agitation. It is a known fact that the deaf and dumb are often quarrelsome. The explanation lies in their inability to express their thoughts. There is an inner wealth and richness which tries to find expression ;

it does so in the ordinary child, but amidst great difficulties.

There is a period of difficulties which we must take into consideration ; difficulties caused by the environment and by the child's own limitations. This is the *second difficult period* of adaptation, the first was that of birth when the child was suddenly called upon to function for himself, whilst his mother had hitherto done it for him. We saw then, that unless great care and understanding were shown, birth terror affected the child and caused regressions. Certain children are stronger than others, certain others have a more favourable environment, and these go straight to independence, the path of normal development, without regressions. A parallel situation is seen at this period. The conquest of language is a laborious conquest towards a greater independence, and it ends in the freedom of language, but there are parallel dangers of regression too.

We must also remember another characteristic of this creative period, *viz.*, every impression and the result of it has a tendency to remain permanently registered. This is true for the sounds and for grammar. Children taking in knowledge now retain it for the rest of their life ; so also if there are obstacles at this period their effect will remain permanently. This is the characteristic of every epoch of creation. A struggle, fright or other obstacles, may produce effects that remain for the rest of life, since the reactions to those obstacles are absorbed like everything else in development. (In the same way if there

is a spot of light on the photographic film we mentioned above, all the prints of that film will show that spot.) In this epoch therefore we have not only a development of the character, but also a development of certain deviated psychic characteristics which children will manifest as they grow older. Knowledge of the mother-tongue and the faculty of walking are acquired at this epoch of the child's life, during the creative period which goes beyond the age of two and a half years, but is then less strong. The acquisition of these two faculties takes place now, but their growth and development continue afterwards. So also it is with any defects and obstacles acquired now ; they remain, and grow ; and so many defects that adult people present are attributed to this distant epoch of their life.

The difficulties that mar normal development are included in the term *repression,* (this term is particularly used in psycho-analysis, but also in psychology generally). These repressions, now known to the general public, refer to this age in childhood. Examples of these repressions may be given in connection with language itself, though there are many more having a relationship with other human activities. The mass of words that explodes must have *freedom of emission.* Also when the explosion of sentences occurs and a child gives regular form to his thoughts there must be *freedom of expression.* Great emphasis is laid on freedom of expression, because it is not only connected with the immediate present of the

developing mechanism, but also with the future life of the individual. There have been certain cases where, at the age when the explosion should take place, nothing occurred ; at more than three or three and a half years the child still used only the few words of a much earlier age and appeared as a dumb child, although his organs of speech were perfectly normal. This is called 'psychic mutism' and it has a purely psychological cause, it is a psychic illness. This is the epoch of the origin of psychic illnesses and psycho-analysis (which is really a branch of medicine) studies them. Sometimes psychic mutism disappears suddenly like a miracle ; a child speaks suddenly, well and completely, with a full grasp of grammar, as he is already prepared inwardly, only the expression had been hindered by some obstacle. We have had children in our schools of three and four years of age who had never spoken and then suddenly spoke. They had never even spoken the words of the two-year old, they were absolutely dumb and then suddenly they spoke. By allowing them free activity and a stimulating environment, they suddenly manifested this power. Why does this happen ? Because either a great shock or persistent opposition has impeded the child hitherto from giving forth the wealth of his language.

There are adult people also who find difficulty in speaking ; they have to make a great effort and they look as if they were not sure what to say, there is a hesitation. There are different reasons for this hesitation :

(*a*) they do not have the courage to speak,
(*b*) they do not have the courage to pronounce the words,
(*c*) they have a difficulty in using sentences,
(*d*) they speak more slowly than a normal person and say " er, um, ah " etc.

They find a difficulty in themselves which is fatal and remains throughout life ; it represents a state of permanent inferiority in the person.

There are also psychic impediments which prevent an adult speaker from articulating words clearly ; cases of stuttering and stammering. This is a defect that has had birth during the period when the mechanisms themselves were being organized. So there are different epochs of acquisition and corresponding regressions may occur at those epochs :

First period : Mechanism of words is acquired,
Corresponding regression—stammering

Second period : Mechanism of sentence (expression of thought) is acquired,
Corresponding regression—hesitation in the formulation of thoughts.

These regressions are related to the sensitivity of the child ; as he is sensitive to receive, in order to produce, so also he is sensitive to obstacles that are too strong for him. The results of this thwarted sensitivity then remain as a defect for the rest of life. It is because this

sensitivity of the child is greater than anything we can imagine that these things take place.

Let us then study these obstacles. It is an adult who is responsible for these anomalies, an adult who acts too violently in his dealings with the child. Non-violence must be exaggerated, because what may not be violence for the adult is often violence for the child. We do not realize when we are violent to children, so we must study ourselves. The preparation for education is a study of oneself; and the preparation of a teacher who is to help life is more than a mere intellectual preparation, it is a preparation of character, a spiritual preparation.

The sensitivity of the child presents various aspects, but some things are common to all. One is a sensitivity to shocks at this period. Another common feature is sensitivity to the calm but cold, determined effort of the adult to prevent outer manifestations of children : " You *mustn't* do this ! " " It is not done ". Those who have the good fortune (!) to have what is called a well-trained nurse for their children should especially beware of this tendency in her ; she very often has it. That is why this type of impediment is so frequent among aristocrats, they do not lack physical courage, but when they speak they stutter and stammer. I wish to stress this question of violence. It must be understood from the child's point of view, and we must be very delicate in our behaviour. It has happened to me to be violent to children

and I have given an example in one of my books.[1] A child put his pair of outdoor shoes on the nice silk coverlet of his bed. I removed them very determinedly, put them on the floor and brushed the coverlet vigorously with my hand, to demonstrate that it was not the place for shoes. For two or three months after that, whenever the child saw a pair of shoes, he changed their position and then looked round for some silk coverlet or cushion to clean. The answer of the child to my too vigorous (violent) lesson, was not a crude, rebellious spirit. He did not say : " Do not talk, I will put my shoes where I like ! ", but an abnormal development. The child is so often non-violent in his reactions. I wish he were not, rebellion would be better than taking the faulty path to anomalies. The child with tantrums has found out how to defend himself and may arrive at normal development, but when a child responds by changing his character, this affects his whole life. Yet people take no notice of this, they only worry about tantrums !

There is another fact : certain senseless fears and ' nervous ' habits which we find in adults can be traced to violence to the child's sensitivity. Some of the senseless fears concern animals, cats and hens ; some concern remaining in a room with the doors closed, etc. No reasoning, no persuasion can help the victims of these fears. I once had a colleague, a Professor of Pedagogy in a University of Italy. She was forty-five years old and

[1] Cf. *The Secret of Childhood.*

she came to me one day and said : " You are a doctor and will understand. Every time I see a hen I am terribly frightened, I have to make an effort not to shriek. I tell nobody ; they would laugh at me." Perhaps, as a tiny girl of two and a half years, she went to fondle a fluffy baby-chick and met the sudden agitated frenzy of the watchful mother-hen. The feathered fury of that hen gave her a shock which remained. These kinds of unreasonable fears are included under the name *phobias* ; some are so common that they have special names such as claustrophobia (the fear of closed doors, of a confined space). Many more examples could be given if we entered the field of medicine. I mention them to illustrate the mental form of children of this age.

Our action is not reflected merely in a sweet or naughty child, but in the adult who will result from this child. Therefore, I repeat, this epoch of the child's life is very important for the rest of his life and for humanity ; it must be studied. This study is very important, but it hardly exists as yet. It is necessary to embark on this path, which is a path of discovery. It is necessary to try and penetrate into the mind of the child, as the psychoanalyst penetrates into the sub-conscious of the adult. It is difficult because we often do not understand their language, or if we do, we don't understand the meaning they give to the words they use. Sometimes it is necessary also to know the rest of the life of the child ; it is a sort of research work or detective work, but a

research work of great utility because through it we bring peace to this difficult period. We need a translator, an interpreter of the child and his language, and this interpretation will allow us to understand the child's state of mind. I myself have worked in this sense and tried to become the interpreter of the child and it has been curious to see how the children run to this interpreter, because they realize there is someone who can help them. This eagerness of the child is something entirely different from the affection of the child who is petted or caressed. The interpreter is to the child a great hope, someone who will open to him the path of discovery when the world had already closed its doors. This helper is taken into the closest relationship, a relationship that is more than affection because *help* is given, not merely consolation.

In a house where I was living and working I used to rise early in the morning, before the rest of the family, and work. One day a little child of the family, not more than one and a half years old, came in at this early hour. I thought he had got up because he was hungry and wanted food, so I said: "What would you like?" He said: "I want worms". I was startled and said: "Worms? Worms?" The child realized I did not understand, but was trying to do so, so he gave me some more help and added: "Egg." I thought: "This can't be a breakfast that he wants; what does he want?" Then he added another word:

" Nena, egg, worms ". Light came to my mind. I remembered a fact (and that is why I say you must know something of the circumstances of the child's life). The previous day his little sister, Nena, was filling up the oval inset, drawing with coloured pencils. This little one had wanted the pencils and the sister had defended herself and told him to go away. Now, (see the mind of the child), he did not oppose his sister, but waited for his chance, and with what patience and determination. I gave him the pencil and the inset. There was a great light on the face of the child, but he could not make the ' egg ', so I had to make it for him. Then after I had made the oval, he filled it up with wavy lines. His sister had used the usual straight lines, but he thought he knew something better, so he made wavy lines, ' worms '. He had waited till he knew everyone was asleep but his interpreter, then he came to her for he felt she would help him. It is not tantrums, violent reactions, but patience that is the real characteristic of this age in all children ; patience to wait for their opportunity. Violent reactions or tantrums express a state of exasperation, when he cannot attain his expression.

This interpreter of words can give light in order to penetrate into the mind of the child. From the example given one can see that the little child tries to carry out the activities followed by older children. If one introduces the child of three years to an activity, the child of one and a half also wants to do it. Probably he will be

impeded and stopped from doing it, but he will try. A small child in our house wanted to copy his sister of three, who was learning her first steps in dancing. The teacher had wanted to know how to teach so young a child to dance ballet, etc. We said : " Never mind, you try it ; what does it matter whether she learns or not ; you will receive your salary." Knowing that we were working to help the child, she agreed to try. Immediately the one and a half year old, said : " Me, too ! " The teacher said : " Absolutely impossible ", and when we said : " Try it ", she said it was derogatory to her dignity as a teacher of ballet to teach a baby of one and a half years. We suggested she put her dignity in her pocket, so at last she came to the house, somewhat disgruntled, threw her hat on the sofa and began to play a march. The little one was immediately furious, and shrieked and would not move. The teacher said : " You see, you can't teach one so small ". But the child was not distressed about the dancing ; he was having a discussion with the hat, addressing it with fury. He did not use the name of the hat itself, nor that of the teacher ; he just used two words which he repeated with concentrated fury : " Hat-rack ! Hall ! " meaning : " This hat must not be here on the sofa, but on the hat-rack in the hall ! " He had forgotten the dance and the pleasures of life, he had his duty to perform of changing disorder into order before anything else. When the hat was on the hat-rack, his fury went and he was ready to dance. Till

then the fundamental need for order erased everything else. So this study allows us to penetrate into the mind of the child to a depth where psychologists generally do not go. The patience of the child in my first example and the passion for order in the second make a picture which it is difficult for us to realize and understand. If we take these pictures, together with that which I mentioned above of the child who understood a whole conversation and disagreed with the final opinion of the happy ending to the story, we see that there are not only the facts represented on figure 9, but a whole mental life, a whole psychic picture usually hidden from us by our own blindness.

Every discovery of the mind of the child at this age must be made known, and not as knowledge to be gained for ourselves, as the knowledge of Sanskrit for instance, but in order to help the child to adapt himself to the environment around him. We must be a help to life all the time, even if it means we have to spend great energy as an interpreter. The task of the teacher of small children is very noble. It belongs to a science that will develop in the future, and will help mental development and the growth of character. Above all we must carry it out so that children may avoid those defects that make certain individuals inferior to others. We must remember, if nothing else, that we must realize :

1. That education in the first two years of life is important to the whole life.

2. That the child is endowed with great intelligence which we cannot see.
3. That he has an extreme sensitivity which may (under any violence) bring forth, not re-action only, but defects incorporated in his personality.

CHAPTER XIII

MOVEMENT AND TOTAL DEVELOPMENT

IT is necessary to consider movement from a new point of view. Because of some misunderstanding, movement is considered less noble than it is, especially the movement of the child. In education as a whole movement is sadly neglected and all importance is given to the brain. Only physical education which up till recently held a very inferior place considers movement, although disconnected from the intelligence.

Let us consider the organization of the nervous system in all its complexity. First of all we have the brain itself ; then the senses which take the images which are to be passed to the brain and thirdly we have the nerves. But what is the aim of the nerves and where do they go ? Their purpose is to give energy, movement to the muscles (the flesh). This complex organism, therefore, consists of three parts : (1) the brain (the centre) ; (2) the senses and (3) the muscles. Movement is the conclusion and the purpose of the nervous system. Without movement we cannot speak of an individual at all. If we think of a great philosopher he speaks of his meditations or writes of them, and so must

use his muscles. If he does nothing with his meditations, of what use are they? Without the muscles, the expression of his thoughts would not exist.

If we turn to animals, their behaviour is only expressed through movement. Therefore, also if we wish to consider the behaviour of man, we must take man's movements into consideration. The muscles are part of the nervous system.

The nervous system in *all* its parts puts man into relationship with his environment; that is why it is also called the System of Relation. It puts man into relationship with the inanimate and animate world and therefore with other individuals; without it there would be no relationship between an individual and his environment.

The other organized systems of the body are comparatively selfish in their aims, because they are exclusively at the service of the body of the individual and of nothing else. They merely allow one to live, or to vegetate as we say; hence they are called the systems and organs of the vegetative life. So there is this difference:

The vegetative systems serve only to help the individual in growing and vegetating,

The nervous system serves to put the individual in relation with other individuals, it is a sort of Minister of Foreign Affairs.

The vegetative systems help man to enjoy the maximum comfort and purity of body and health; hence

we go to places with cool air, good hotels, etc. If we consider the nervous system from a similar point of view, we shall make a mistake ; even if we think it is only to give us the most beautiful impressions and purity of thought and continuous uplift to loftier levels. It is nice to be pure in this field also, but it is a mistake to lower the nervous system to the level of merely vegetative life. If this criterion of mere purity and uplift *of the individual* is upheld, the individual is led to spiritual selfishness. It is the greatest mistake one can make. The behaviour of animals does not tend merely to be beautiful and graceful in movement ; it has a purpose deeper than that. So has man a purpose which is not just to be purer and finer than others. Of course, man can and should be beautiful and take only the finest things on the loftiest levels, but if that is his *only* aim, his life would be useless. What would be the use of this mass of brain then, or of these muscles ?

There is nothing in this world which does not form part of a universal economy ; and if we have spiritual richness, æsthetic greatness, it is not for ourselves, it is part of the spiritual, universal economy and must be used for the universe. The spiritual powers *are* wealth, but not personal wealth ; they must be put into circulation for the rest to enjoy ; they must be expressed, made use of, and in this way complete the cycle of relationship. If I content myself to become pure so that I may go to heaven, I might as well die. I should have left aside the

greatest part of my life and the greatest part of the aim of my life. If one should believe in reincarnation and say : " I shall have a better life next time if I live well now ", this is selfish. We have reduced the spiritual to the vegetative level. We are always thinking of ourselves, of ourselves in eternity. We are egotists for eternity. The other point of view must be taken into consideration, not only in the practice of life, but also in education. There must be completeness of function. Nature has endowed us with functions ; therefore it is necessary that they be exercised.

Let us make a comparison. If we have lungs, a stomach, a heart, it is necessary that these function in order to have health. Why not apply the same rule to the nervous system ? If we have a brain, senses and organs of movement, they must function, and if we do not exercise *every* part we cannot even understand them with certainty. Even if we wish to uplift ourselves, make our brains finer for instance, we cannot do so unless we use *all* the parts. Perhaps movement is the last part that will complete the cycle. In other words, we can obtain spiritual uplift through action. This is the point of view from which to consider movement ; it is part of the nervous system and cannot be discarded. The nervous system is one, a unity, though it has three parts. Being a unity, it must be exercised in its totality to become better.

One of the mistakes of modern times is to consider movement separately from the higher functions. People

think that the muscles are merely there and have to be used in order to keep better bodily health. In order to keep fit or as recreation we play tennis. If we do that we can breathe more deeply. What an idea ! Or we go for a walk to ensure better digestion and sleep, forsooth ! This mistake is penetrating education. This is, physiologically speaking, as though a great prince had been made use of to serve a shepherd. This great prince—the muscular system—has become a handle to turn in order to stimulate the vegetative system. *This is the great mistake.* It leads to separation : physical life is put on one side and mental life on the other. The result is that, since the child must develop physically as well as mentally, we must include physical exercise, games, etc. What has mental life to do with physical pastimes ? Nothing. Yet we cannot separate two things that nature has put together. If we consider physical life on one side and mental life on the other, we break the cycle of relation, and the actions of man remain separated from the brain. The motor actions of man are used to aid better eating and breathing, whereas the real purpose is that movement be the servant of the *whole* life and of the spiritual, universal economy of the world.

The motor actions of man must be co-ordinated to the centre—the brain—and put in their right place ; this is fundamental. Mind and activity are two parts of the same cycle and, moreover, movement is the expression of the superior part. Otherwise we make man a mass of

muscles, but without a brain. Something is out of place as with a broken bone and the limb does not serve any more. Man then develops his vegetative life and the relation between the motor part and the brain is left out. There is a self-determination of the brain apart from movement and muscles. This is *not* independence ; it is to break something that nature in her wisdom has put together. If mental development is spoken of, people say : " Movement ? There is no need for movement ; we are talking about *mental* growth ! " When they think of mental improvement they imagine all are sitting down, moving nothing. But mental development *must* be connected with movement and is dependent on it. This is the new idea that must enter educational theory and practice.

Up to the present most educationists have considered movement and muscles as a help to breathing, improving the circulation, etc., or, if movement is indulged in, it is to acquire greater muscular strength. It remains a part of physical education only. What is the individual supposed to do with it ?

Our new conception stresses the importance of movement as a help to the development of the brain, once it is placed in relation to the centre. Mental development and even spiritual development can and must be helped by movement. Without movement there is no progress and no health (mentally speaking). This is a fundamental fact which must be taken into consideration.

I might be asked to demonstrate these facts, but they are not ideas, nor even personal experiences. They are demonstrated whenever we observe nature, her facts, and the precision given to this observation comes from watching the development of the child. Watching him, one sees that he develops his mind by using his movements. The development of language, for instance, shows an improvement of understanding accompanied by an ever extending use of the muscles of production. Besides this and other examples the child, scientifically observed, shows that he develops his intelligence generally through movement. Observations made all over the world have shown that the child demonstrates that movement helps psychic development, that development expresses itself in its turn by further movement and action. So it is a cycle, because both psyche and movement belong to the same unity. The senses also help. Without opportunity for sensorial activity the child is less intelligent. That is why the examination of the development of the small child is of such great aid to the *whole* of education.

Now muscles (flesh), the activity of which is directed by the brain, are called voluntary muscles ; that means that they are moved by the will of the individual. The will is one of the greatest expressions of the psyche. Without that energy psychic life does not exist. Therefore, since the voluntary muscles are the muscles depending on the will, they are a psychic organ.

The muscles are the main part of the body. Take a mammal and take off its flesh, what is left? Skeleton, bones. What is their purpose? To support the muscles, so they also belong to this section. Take them away then. What is left? Very little. The main part which has been developed by nature has been taken away. And if we look at someone and say how beautiful he is, or the opposite, the form which we contemplate is given by muscles attached to the bones. All animals endowed with an inner skeleton owe their form to voluntary muscles and when we see a camel in proud disdain or a lady walking gracefully or a child playing, we see merely form given to each by its own flesh (muscles). These muscles are interesting to study in form and number. They are in great quantity. People who study medicine say that students must forget them seven times before they remember them and even then they forget! Some are delicate, some bulky, some short, some long, they have different functions. A curious fact is that if one muscle functions in one direction, there is always another functioning in the opposite direction, and the more vigorous and refined this play of opposite forces, the more refined the movement resulting therefrom. The exercise one takes to attain more harmonious movement is an exercise to put more harmony in the opposition. So what is important is not agreement, but *opposition in agreement.*

The child or person is not conscious of this opposition, but nevertheless it is the way movement takes

place. In animals the perfection of movement is given by nature. The gracefulness of the tiger's pounce or the running up and down of the squirrel is due to a wealth of opposition put into play to attain that harmony, like a complicated piece of machinery working well, like a watch with wheels going in opposite directions ; when the whole mechanism runs smoothly, we have the correct time. So the mechanism of movement is very complicated and more refined then one could imagine. In man this mechanism is not pre-established before birth and so it must be created, achieved through practical experiences on the environment. The number of muscles in man is so great that he can achieve any movement, so we do not speak of exercise of movement, but of co-ordination of movement. This co-ordination is not given, it has to be created and achieved by the psyche. In other words the child creates his own movements and, having done so, perfects them. The child has a creative part in this work and then achieves a development of what he has created through a series of exercises.

It is really marvellous that man's movements are not limited and fixed, but that he can control them. Some animals have a characteristic ability to climb or to run ; these are not man's characteristic movements, but he can do both very well. Certain animals have a characteristic ability to burrow in the earth ; it is not a characteristic of man, yet he can go deeper than any of them. So his characteristic is that he can do all movements

and extend them further than any animal ; he can make some of them his own. So we might say that his characteristic is universal versatility, but there is one condition : he must construct them himself. He must work and create by will, and repeat the exercises for co-ordination sub-consciously as to their purpose, but voluntarily as to his initiative. So he can conquer all. As a matter of fact, however, no individual conquers all his muscles, but all are there. Man is like very wealthy people, he is so wealthy that he can only use part of his wealth ; he chooses which part. If a man is a professional gymnast, it is not that special muscular ability was given to him ; nor is a dancer born with certain refined muscles for dancing ; he or she develops them by will. Anyone, no matter what he wants to do, is endowed by nature with such a wealth of muscles that he can find among them what he needs, and his psyche can direct and create any development. Nothing is established, but everything is possible, provided proper direction is given by the individual psyche.

It is not in man to do the same standardized thing as in animals of the same species. Even if the same thing is done by some, it is done in a different manner. We all write, but each has his own handwriting. Each has his own path always.

We see in movement as it is developed the work of the individual, and the work of the individual is expressing his psychic life ; it *is* the psychic life itself. It has

at its disposal a great treasure of movements, so movement is developed in service of the central part, *i.e.* of the psychic life. If man does not develop all his muscles, even of those he does develop some are only for rough work. So man's psychic life is limited in as much as his muscles only develop for rough action, not for refined action. It is limited also by the type of work that is accessible or chosen. The psychic life of those who do no work is in great danger. We might say that though all muscles cannot be put in motion, it is dangerous for the psychic life to go below a certain number. If the number of muscles in use is not sufficient, then there is a weakness of the whole life. That is why gymnastics, games, etc., were introduced in education ; too many muscles were being left aside.

The psychic life must use more muscles or else we also shall have to follow the double path of ordinary education alternating physical and mental activities. The purpose in using these muscles is not to learn certain things. Some forms of 'modern' education develop movement just because there is a desire to serve a certain direct purpose in social life ; *e.g.* one child must write well because he is going to be a teacher and another is going to be coalheaver so he must shovel well. This narrow and direct training does not serve the purpose or aim of movement. Our purpose must be that man develop the co-ordination of movements necessary for his psychic life ; to enrich the practical and executive

side of psychic life. Otherwise the brain develops apart from realization through movement and cannot fulfil its directive function regarding movement and that brings only revolution and disaster in the world. Movement then works by itself, undirected by the psyche, and so brings destruction. As movement is so necessary to the human life of relations with the environment and other men, it is on *this* level that movement must be developed, in service of the whole. It is not work to be first in one's art or profession.

The principle and idea today are too much directed towards *self*-perfection, *self*-realization. If we understand the real aim of movement this self-centralization cannot exist ; it must expand into the immensity of space. We must, in short, keep in mind what might be called the 'philosophy of movement'. Movement is what distinguishes life from inanimate things. Life, however, does not move in a haphazard fashion, it moves with a purpose and according to laws. In order to realize this fact let us just imagine what the world would be like if it were quiet, without movement. Imagine what it would be like if all the plants stopped living, if the movement within the plant ceased. There would be no more fruits, nor flowers. The percentage of poisonous gas in the air would increase and cause disaster. If all movement stopped, if the birds remained motionless on the trees, or if insects fluttered to the ground and remained still, if the wild beasts of prey did no longer move through the

jungles, or the fish stopped swimming in the oceans, what a terrible world it would be !

Immobilization is impossible, the world would become a chaos if movement ceased or if living beings moved without purpose. Nature gives a useful purpose to each living being. Each individual has its own characteristic movements with its own fixed purpose. The creation of the world is a harmonious co-ordination of all these activities with a set purpose.

And imagine what a society of men would be like if it were without movement ! The movement of humanity shows the intelligence of a personality. Think what would happen if all men stopped moving for even one week only. Everyone would die. Work and movement are one, the question of movement is a social question. It is not a question concerning individual gymnastics. If the whole society of men all over the world did nothing but performing some physical jerks, humanity would die in a short time. All its energies would be consumed for nothing.

Society is formed by a complexity of individuals, each of whom moves differently from the other, following his own individual purpose. The individual moves in order to carry out this purpose. The basis of society is formed by movement with a useful aim. When we speak about 'behaviour', the behaviour of men and animals, we refer to their purposeful movements. This behaviour is the centre of their practical life. It is not

confined to the practical life in a house, cleaning the rooms, washing clothes, etc. This is important of course, but everyone in the world must move with a larger purpose, everyone must work not for himself alone, but also for others. It is strange that man's work must also be work in the service of others. If this were not so, his work would have no more meaning than gymnastic exercise. All work is done for others as well. Dancing is perhaps one of the most individual movements, but even dancing would be pointless without an audience, without a social or transcendental aim. The dancers who perfect their movements with so much trouble and fatigue, dance for others. Tailors who spend their lives sewing, could not possibly wear all the clothes they make. Yet tailoring, like gymnastics, requires many trained movements.

If we have a vision of the cosmic plan in which every form of life in the world is based on purposeful movements, having their purpose not in themselves alone, we shall be able to understand and to direct the children's work better.

CHAPTER XIV

INTELLIGENCE AND THE HAND

THE study of the mechanical development of movement is considered to be very important, because it is a complicated machine, each part of which is of great value. That is why the movement of small children has been studied with great attention and as nothing is hidden, but all is manifested outwardly, it can be very clearly followed.

In figure 12, the development of movement is shown by the two lines with various triangles standing on it. These lines are guides to different forms of movement, the blue triangles mark every six months and the red-topped ones every twelve-months. The lower line represents the development of the hand and the upper line represents the development of equilibrium and of walking, therefore the diagram represents the development of the four limbs, two by two.

In all animals the four limbs develop in movement together, but in man the one pair of limbs develops differently from the other pair. This clearly shows that their function is different. The function of the legs is quite different from the function of the arms. Another thing

which stands out is that the development of walking and equilibrium is so fixed in all men that one might call it a biological fact. We might say that after birth man will walk and all men will do exactly the same thing with their feet, but we do not know what the individual man will do with his hands. We do not know what particular activity of the hands is possible or has been possible in the past ; their function is not fixed. So the types of movement have a different meaning when considering hands or feet.

It is certain that the function of the feet is biological, yet it is connected with an inner development in the brain. At the same time only man walks on two limbs, all mammals walk on four. Once a man achieves the art of walking on two legs he continues to walk on two legs only and to keep the difficult state of erect equilibrium constantly. This equilibrium is difficult to attain, it is a real conquest. It demands that man put his whole foot on the ground, whereas most animals walk on tiptoe, as a small resting place is sufficient when using four legs. The foot used for walking can be studied from a physiological, biological and anatomical point of view ; it has connections with all of them.

If the hand does not have this biological guide, because actions are not fixed, then with what is it connected ? If not connected with biology and physiology, it must have a psychological connection. The hand then depends on the psyche for development, and not only on the psyche of

an individual ego, but also on the psychic life of different epochs. We see that the development of the hand is connected with the development of the intelligence in man and, if we look at history, it is connected with the development of civilization. We might say that, when man thinks, he thinks and acts with his hands and almost as soon as man appeared on the earth, he left traces of work done by his hands. In great civilizations of past ages there are always samples of his handiwork. In India we can find work so fine that it is almost impossible to imitate it ; and in Ancient Egypt there are also traces of very fine delicate work. If the civilization was of a less refined type, then the handiwork remaining is also of a rougher type.

The development of the hand therefore goes side by side with the development of the intelligence. Certainly the refined type of handiwork needed the attention and guidance of the intelligence to carry it out. In the Middle Ages in Europe there was an epoch of great intellectual awakening and at the same time they covered with beautiful illuminations the writing that conveyed the new thoughts. Even the life of the spirit, which seems so far from the earth and the things of the earth, was nevertheless affected, for we see the result in the temples where the people worshipped, and this is to be found wherever there is spiritual life.

St. Francis of Assisi whose spirit was perhaps the simplest and purest once said : " You see these

mountains ; these are our temples and from these we must seek inspiration." Yet when once asked to build a church he and his spiritual brethren being poor used the rough stones that were available. They all carried the stones to build the chapel and why ? Because if there is a free spirit it needs to be materialized in some kind of work and the hands must come into use. Everywhere are the traces of the hand of man, and in these traces we can read the spirit of man and the thought of his time.

If we talk of Christianity, it may be difficult to make its influence demonstrable, but when we see countries covered with churches, with works of art and beautiful cloth of all kinds, with hospitals and educational institutions, we can realize its spiritual and cultural effect.

And if we look into the dim past, of which not even bones are left, what gives us knowledge of the peoples and their times ? Their works of art. When we look into these prehistoric times, we see there the rougher sort of civilization based on strength : the statues and works of art are formed from huge masses of stones and we wonder how they got there. Elsewhere we see finer works of art and we say : " Here was a more refined race ". How do we know ? No man of them is left, but the works of man tell us. So that we can see that the hand has followed the intelligence, spirit and emotions, and touching all these, has left us the traces of man. Even if we do not take the psychological point of view,

we still see that all changes in man's environment have been made by the hand of man. Really, it would seem that the purpose of having intelligence was almost to have hands, because if the intelligence of man had merely built up his spoken language in order to communicate with others, nothing would have been left behind when that race of men died out. They would have stated their wisdom by mere breath. It is because the hands have accompanied the intelligence that civilization has been built up, therefore we can well say that the hand is the organ of that immense treasure given to man.

The hands therefore are connected with psychic life. In fact those who study the hand show that there is an intuition that the history of man is printed in the hand, that it is a psychic organ. Therefore the study of the psychic development of the child must be closely linked up with the study of the development of the hand. The child has clearly shown that his development is connected with the hand which reveals this psychic urge. We can express it this way: the intelligence of the child will reach a certain level without the use of the hand; with the hands it reaches a still higher level, and the child who has used his hands has a stronger character. So we see that even the development of character, which seems so completely within the psychic field, remains rudimentary, if it has no opportunity of practising on the environment (which means through the hand). The child has shown us most clearly that if (through circumstances in the

environment) he cannot use his hands, his character remains on a very low level, incapable of obedience, of initiative, lazy and sad, whereas the child who has been able to work with his hands shows also a development and firmness of character. This reminds us of an interesting point in the Egyptian civilization when work with the hand was present everywhere, in the fields of art, of construction, of religion ; if we read the inscriptions on the burial places of that time the highest praise accorded to any man was that he was a person of character. The development of character was important to them and they were people of great works carried out by the hand. This is one more instance of the fact that the movement of the hand follows through history the development of character and civilization. It shows how the hand is connected with the individuality. And if we examine how all these people walked, we always find of course that they walked on two legs, erect and with equilibrium. Probably they danced and ran a little differently, but they always used two legs for ordinary locomotion.

It is therefore clear that the development of movement is twofold ; one part is biological and the other, though using the muscles, is nevertheless connected with the inner life. If we study the child we consequently study two developments : the development of the hand apart from that of equilibrium and walking. In figure 12 we see that only at one and a half years any connection between the two takes place. It is when the child wants

to transport heavy things that his legs must help him, otherwise there is no connection. These feet that are able to walk and transport him to various parts of the earth, take him there so that he can work with his hands. A man walks and walks and gradually covers the face of the earth, and through this invasion by walking he lives and dies, but he leaves behind him the trace of his passage in the work of his hands.

When we studied language we saw that speech is connected especially with hearing, whereas in the development of movement we see this is connected with sight ; first of all because we must have eyes to see where to put our feet, and when we work with our hands we must see what we do. These are the two senses specially connected with development : hearing and sight. In the development of children first of all there is observation of the environment, because he must know the environment in which he has to move. This observation is carried out before he can move and then he orients himself in it ; so the orientation in the environment and movement are both connected with psychic development. That is why the new-born babe is immobile at first, when he moves he follows the guide of his psyche.

The first development in movement is that of grasping or prehension ; as soon as the hand grasps something the consciousness is called to this hand which has been able to do so. Prehension is unconscious at first and then conscious. The hand calls for the attention of

consciousness whereas the feet do nothing of the sort. When the consciousness is called to this fact, prehension is developed, so that what was instinctive prehension becomes intentional prehension, and it is at six months that the child shows this development. At ten months observation of the environment has awakened the interest of the child and he wants to catch hold of it ; intentional prehension is accompanied by desire and mere prehension ceases. After this begins the exercise of the hand, it begins to change the places of objects. There is a vision of the environment, there is a desire and the hand begins to do something in the environment. Before one year of age the child carries out many actions with his hand that are ever so many types of work. He opens and closes doors, drawers, puts stoppers in bottles, puts objects on one side and then puts them back, etc. It is through these exercises that the child acquires ability.

What has happened to the other pair of limbs ? Neither intelligence nor consciousness has been called forth. There is something anatomical happening however : the rapid development of the cerebellum, the director of equilibrium. It is as though a bell rang and called an inert body to get up and attain equilibrium. The environment has nothing to do with it ; the cerebellum orders it and the child, with effort and help, sits up and then gets up by itself. Psychologists say, man gets up in four periods. Then the baby turns on his

tummy and walks on four limbs, and if, during this time when he begins crawling, you give him two fingers, he will make the feet go one in front of the other, but on his toes. Before this, even with the help of two fingers, he would not walk, the cerebellum and not the environment is responsible.

When at last he stands by himself, he rests his whole foot on the ground ; he has attained the normal erect position of man and can walk if he holds on to something (mother's skirt). After a little while he can walk alone. The tendency now is to say : " Goodbye ; I have my two legs, and off I go " ! Another stage of independence is attained, for the acquisition of independence is the beginning of doing things by oneself. The philosophy of these steps of development tells us that independence and development of man is attained by effort. To be able to do without other people's help is independence, it is not comfort. If independence is there the child progresses very rapidly ; if it is not there the progress is very slow. So if we keep this picture in mind we know the way of dealing with the child, and it is a useful guide. We are taught *not* to help him, whereas we always fall on him to help him. The child who is capable of walking alone must walk by himself, because all development is strengthened by exercise and all acquisition confirmed by exercise. When a child of even three years is carried, as I have often seen, his development is not helped, but hindered. Immediately

the child has acquired independence the adult who should continue to help him becomes an obstacle to the child. It is therefore clear that we must not carry the child, but permit him to walk, and if his hand wants to work, we must give him motives of intelligent activity. The child by his actions goes to greater conquests of independence.

It has been noticed that there is a very important and visible factor at one and a half years of age in both the development of the hands and of the feet, this fact is strength. This child who has acquired agility and ability is now a strong man. His first urge in doing anything is to use the maximum effort ; not merely to exercise, but to make the maximum effort (so different from the adult). This is brought about by nature which seems to admonish : "You have the possibility and agility to go about, now become strong or it is of no use." It is now that the contact of hands and equilibrium takes place. Then what do we see ? The child instead of merely walking, likes to walk far and carry heavy loads. Man is destined not only to walk, but to shoulder his load. The hand that has learnt to grasp must exercise itself also by sustaining and carrying weight. So we see the one and a half year old with a large jug of water, adjusting his equilibrium and walking slowly. There is the tendency also to break the laws of gravity and overcome them. Having learnt to walk, why not be satisfied to walk ? No ! He must climb and to do so must grasp

something with his hand and pull himself up. This is no longer a grasping to possess, but grasping with a desire to go up. It is an exercise of strength, and there is a whole period of this exercise of strength. Again there is the logic of nature here, since man must exercise his strength. Then what follows next? The child, capable of walking, sure of his strength, seeing the actions of men around him, has a tendency to imitate them. Nature's first task for him is to take in, to absorb the actions of the humanity of his period. So there is an imitative period in which the child imitates the actions of his surroundings not because someone tells him to imitate them, but because of an inner urge. This imitation is only seen if the child is free to act. We then see the logic of nature :

1. To make man stand erect.
2. To make him go around and acquire strength.
3. To make him take in the actions of the people around him.

There is a preparation in time that precedes the action. First he must prepare himself and his instruments, then he must get strong, then look at others and start doing something. While he does that, nature also tells him to prepare by gymnastics, to climb chairs and steps. Then only comes the stage when he wants to do things by himself. " I have prepared myself and now I want to be free, thank you ! " No psychologist has taken into sufficient account that the child becomes a great

walker who is in need of long walks. Usually we carry him or put him in a perambulator and so the poor child can only walk in imagination.

He can't walk, we carry him ; he can't work ; we do it for him : on the threshold of life we give him an inferiority complex.

CHAPTER XV

DEVELOPMENT AND IMITATION

In the last chapter we left the child at the age of one and a half years ; this age has become a centre of interest and is considered of the greatest importance in education. It may seem strange that this period should seem so important, but we must remember that it is the point where the preparation of the upper and the lower limbs coincides. Also it will appear natural if we consider that the child at that epoch is on the eve of the disclosure of his fullness of manhood for at two years he reaches a point of completion with the explosion of language. On the eve of that event, at 1½ years, he is already making efforts to express what is within him. It is an epoch of effort and an epoch of construction.

Once the importance of something has been discovered, everybody at once sets to work. Humanity is generous, but ignorant, so when they learn of something they precipitate themselves, usually with too much enthusiasm, and so also in this instance. Philosophers, psychologists, sociologists and others have centred their interest on the child of 1½ to 2 years of age. This

is an epoch of development in which special care must be taken not to destroy the tendencies of life. If nature has given us such clear indications that this is the period of maximum effort we must support this effort. This is a general statement, but those who observe become more exact in the details they give. They state that at this epoch the child begins to show an instinct of imitation. This, in itself, is not a new discovery, because at all times people have said that children imitate, but hitherto this was a superficial statement. Now it is realized that the human child must *understand* before it imitates ; this is logical, but it had not occurred to anyone before. The old idea was that we only had to act and the children would follow, there was hardly any further responsibility for the adult. Of course it was also said that we had to set a good example. This sets forth the importance of all adults, especially teachers. They must set a good example if there is to be a good humanity. Mothers also were specially included. The feeling was that children who have bad examples will grow up badly. The adult therefore stressed that he had set a good example for his children to imitate and the real responsibility was thrown on the heads of the children surrounding him, it was their fault if they did not profit by the good example the adults so generously gave to them. The result was unhappiness everywhere, for although children ought to become models of perfection, they were far from it. We wanted a perfect humanity and thought humanity was to be perfect

by imitating us, but we were imperfect ; what a confusion ! Nature has not reasoned like we, she has reasoned another way ; she does not bother about perfection in adults. What is important is that in order to imitate, the child has to be prepared to do so. It is this preparation that matters and it depends on the efforts of the individual child. The example offers a motive to imitation, it is not the aim. It is the effort of imitation which develops, not the attainment of the examples given. In fact the child once launched on the part of this effort often surpasses in perfection and exactitude the example, which served as an incentive.

Some people think : " If I want my child to be a pianist, let me (or a teacher) be a pianist and the child will imitate ". But it is not as simple as that and many of us know that a child has to prepare his hands in order to gain the necessary agility enabling him to do anything on the pianoforte. Yet we follow this simple reasoning in matters which are on lofty levels. We read or tell the child stories of heroes and saints and think the child will imitate. It is not so easy. His spirit must be prepared. One does not become great by imitation. An example may furnish inspiration and interest, the instinct of imitation spur the effort, but even then one must have a preparation to carry this out and, in education, nature has shown that without preparation no imitation is possible. The effort does not aim at imitation, it aims at *creating in oneself the possibility of imitation*, of

transforming oneself into the thing desired. Hence the value of indirect preparation in all things. Nature does not merely give the power of imitation, but that of transforming oneself to become what the example demonstrates. And if we, as educationists, believe in helping life, we must see which are the things we must help.

If one observes a child of this age, one sees that there are certain activities that the child sets out to do. To us they may seem absurd, but that does not matter. He must carry them out completely. There is a vital urge to carry out certain things, and if the cycle of this urge is broken, the result is deviation and lack of purpose. The possibility of carrying out this cycle of activity is considered important now, just as the indirect preparation is considered important ; it *is* an indirect preparation. Even all through life we prepare for the future indirectly. In the lives of those who have done something in the world, there has always been a previous period of something worked for ; it may not have been on the same lines as the final work, but there is intense effort on *some* line which gives a preparation of the spirit, and this effort must be fully expanded, the cycle must be completed. So if we see any intelligent activity in the child, even if it seems to us absurd or not according to our wishes (as long as it is not dangerous to life and limb of course !), we must not interfere, because the child must complete his cycle of activity. Children of this age show many interesting forms of carrying out this cycle of activity ;

one sees children below two years of age carrying big heavy weights far beyond their strength, and for no apparent reason. In a house of a friend of mine were very heavy footstools, and a child of one and a half years carried all of them with much effort from one end of the room to the other. Children will help to lay the table and carry large loaves of bread in front of them so that they cannot even see their own feet. They will continue doing these activities, carrying things back and forth, until they are tired. The adult's usual reaction is to have sympathy for the child's effort, they go to help him and take the weight from him, but psychologists have recognized that such 'help', which is an interruption of the child's own chosen cycle of activity, is one of the greatest repressions of this age. The deviations of many 'difficult' children are traced back to this interrupted cycle of activity. Another effort is to climb staircases; for us to climb up a difficult staircase is an aim, but not for the child. Having accomplished the climbing he is not satisfied, he must come back to the starting point to complete the cycle and this too they repeat many times. The wooden or concrete slides we see in children's playgrounds offer opportunities for these activities; it is not the coming down that is important, it is the joy of going up, the joy of effort.

It is so difficult to find people who do not interrupt that all the psychologists ask for places where children can work uninterruptedly, and hence the schools for

very little children are very important and the most important of all are those for little ones from 1½ years. All sorts of things are created in those schools : small houses in trees with ladders to climb up and go down. The house is not to live in or rest in, but a point to reach so that you can go up there and come down again : effort is the purpose, but the house gives a centre of interest. We notice it with our own material : if the child wants to carry something, it always chooses either the brown stairs or the cylinder blocks because they are so heavy. So too the climbing instinct which is so apparent in children is merely an effort to pull himself up, he looks for *difficult* things in the environment to climb on, like a chair. But a staircase is a very great joy, for there is a tendency in the child to go up. I have seen a child who was climbing a very steep staircase from one floor of a house to the other ; the steps were so steep that they reached to the child's middle and he had to use both hands to pull himself up and then put his legs round in a most difficult position, but he had the constancy to reach the top, 45 steps. Then he looked back to see what he had achieved, overbalanced and went head over heels backwards down the stairs. They were thickly carpeted and when he had reached the last bump and was at the bottom again, he was facing right round into the room. We thought he would cry, but he laughed as if to say : " How hard to go up and how easy to come down ; just what I wanted ! "

Sometimes these efforts are efforts of attention and fine co-ordination of movement, not merely efforts of strength. One child of 1½ years I knew, who was free to go round the house, came to a store-room where there were twelve large napkins, starched and ironed, ready to be put away. The baby took the top one with both hands, happy to see that it came away from the pile, went along the corridor and laid it on the floor in the farthest corner. Having done that he came back for another and put that in the same place ; he did this for all the twelve napkins and each time he took one, he said ; "One". Having put them all in the corner, from our standpoint the work was finished, but no ! As soon as the last one was in the corner, he started from there and brought them all back in exactly the same way, saying : "one", each time, and left them where he found them. The attention and the tension of the child during the whole time was marvellous to see and his face had a delighted expression as he went away at last on further business of his own.

These examples of cycles of activity have no outer purpose in themselves, but the child is carrying out exercises giving fine co-ordination of his own movements. And what has he done thereby ? He has prepared himself to imitate certain things. There must be an object in these exercises, but the object is not the real aim ; they obey an inner urge. When he has prepared himself, he can imitate, and the environment affords inspiration.

The dusting of the floor or the making of bread he sees being done, serve him as an inspiration to do likewise.

Walking and Exploring

Let us consider the child of two years and this need for walking which most psychologists do not consider. It is natural that the child should show the tendency to walk, he is preparing man and all essential human faculties are being built. A child of two years can walk for a mile or two miles and, if he likes to climb, so much the better. The difficult points in a walk are the interesting ones. We must realize what walking means to the child ; it is different from our idea. The idea that he could not walk for any distance came because we expect him to walk at our rate. That is as sensible as if we were to tie ourselves to a horse and if, when we became tired trying to keep up with him, he would say : " Never mind, you get on my back and we will both get there ". The child does not want to ' get there ', he wants to walk, but his legs are disproportionate in size to ours and disproportionate to the size of his own body (*cf.* Fig. 7), so we must not make the child follow us, we must follow the child. The need to ' follow the child ' is clearly demonstrated here, but we must remember that it is the rule for all education of children in all fields. The child has his own laws of growth and, if we want to help him grow, we must follow him, not impose ourselves on him. The child walks with his eyes

as well as his legs, and it is the interesting things in the environment that carry him along. He walks and sees a lamb eating, he is interested and sits down by it, watching ; then he gets up and goes further, he sees a flower sits down by it and sniffs at it ; then he sees a tree, walks up to it and round and round it four or five times and then sits down and looks at it. In this way he covers miles ; they are walks full of resting periods and at the same time full of interesting information, and if there is something difficult like a boulder in the way, that is the height of his happiness. Water is another great attraction. Sometimes he will sit down and say : " Water ", happily and all you can see is a tiny stream falling drop by drop. So he has an idea of walking different from that of his nurse, who wants to arrive at a spot in the quickest possible time. She takes him to a park for a walk or a so-called ' airing ' in a perambulator, the hood up, so that he cannot see too many things.

The habits of the child are like those of the primitive tribes of the earth. They did not say : " Let us go to Paris ", Paris was not there. Nor did they say : " Let us catch a train to go to . . .", there were no trains. So their habit was to walk till they found something interesting that attracted them, a forest that might supply wood, a place to sow crops, and so on. So does the child proceed, it is a natural fashion. This instinct of moving about in the environment, passing from attraction to

attraction forms part of nature itself, and of education. Education must consider the walking man who walks as an *explorer*. This is the principle of scouting which is now a relaxation from education, but should form part of education and come earlier in life also. All children should walk in this fashion, guided by attraction ; and it is here that education can give help to the child by giving him a preparation in school, *e.g.* by introducing him to the colours, the shapes and forms of leaves, the habits of insects and other animals, etc. All these give points of interest to him when he goes out. The more he learns, the more he walks. He should explore and that means to be guided by an intellectual interest which *we* must give. Intelligent interest leads man to walk and to move about.

Walking is a complete exercise ; there is no need of other gymnastic efforts. He breathes and digests better and has all the advantages we ask of sports. Beauty of body is formed by walking, and if you find something interesting to pick up and classify, or a trench to dig, or wood to fetch for a fire, then with these actions accompanying walking, the stretching of arms and bending of the body, the exercise is complete. As man studies more he has many interests calling him, and his intellectual interest augments his activity of body. If the child is capable of following these interests, he finds other things he did not know, and so his intellectual interest grows. The path of education has to follow the path of evolution ;

walking about made man see more things, so should the life of the child expand and expand.

This must form part of education, especially today, when people do not walk, but go in vehicles, and there is a tendency towards paralysis and sloth. It is no good to cut life in two and to move limbs by sport and then move the head by reading a book. Life must be one whole, especially at an early age when the child must construct himself according to the plan and laws of development.

CHAPTER XVI

FROM UNCONSCIOUS CREATOR TO CONSCIOUS WORKER

We have been dealing with a part of the development of the child which we have compared to that of the embryo. This type of development continues till 3 years of age. It is full of events because it is a creative period. Yet although it is a period in which the greatest number of events take place, it may nevertheless be called the forgotten period of life. It is as if nature had traced a dividing line ; on one side there are events which it is impossible to remember ; on the other side remembrance begins. The forgotten period is the psycho-embryonic period of life, and may be compared to the physio-embryonic period before birth which nobody can remember.

In this psycho-embryonic period, there are developments which come separately and independently, such as language, the movement of the arms, the movement of the legs, etc., and there are certain sensorial developments like that of the eye in which the muscles are not needed. Like the physical embryo in the prenatal period, which had organs unfolding one by one,

each separate from the other, so in this period the psychic embryo develops faculties separately and we remember nothing of either. This is because there is no unity of the personality. Everything is developing, one after the other, so there cannot be unity as yet ; that can come only with completed parts.

When the age of three years has been reached, it is as though life began again, for then the life of consciousness begins fully and clearly. These two periods—the unconscious psycho-embryonic period and the later period of conscious development seem to be separated by a very definitely marked line. The faculty of conscious memory was not developed in the first period ; only when consciousness comes is there unity of the personality and therefore memory.

Psychically speaking, before three years there is construction and creation (as in the physical embryo in the pre-natal period), and after three years there is development of the faculties created. The border line is compared with the river Lethe of Greek mythology, the river of Forgetfulness. Certainly it is very difficult to remember what happened before three years of age, still more before two years. Psycho-analysis has tried by all sorts of means to bring the consciousness of the individual back to its own history, to the beginning, but no individual could ordinarily and reliably remember further back than three years of age. This is a very dramatic situation, because it is during this first period that

everything is created, starting from nothing and yet the memory of the individual who accomplished all this cannot recall anything, not even the memory of the adult man who is the result of this creation.

This sub-conscious and unconscious creation—this forgotten child—seems to be erased from the memory of man and the child coming to us at three years of age seems to be an incomprehensible being. The communication between him and us has been taken away by nature, so either we have to know the period or to know nature herself.

If we do not take into consideration the natural laws of development and if children take a form of life that departs from its earlier part, the adult must know this former life or there is a danger that the adult destroys what nature would have made. If therefore, because of social development or the way of civilization, man abandons the natural path of life, there is a great danger since the natural provisions are taken away. As humanity in the development of civilization has given protection only to the physical and not to the psychic part of man, the child finds himself in a prison. If civilization is not given the necessary light regarding the natural laws of psychic development the child very likely lives in an environment full of obstacles to normal expression. It must be remembered that during this period the child is entirely in the care of the adult, because it cannot yet provide for himself, and we adults, if not enlightened by

the wisdom of nature or science, will present the greatest obstacles to the life of the child.

After this period the child has acquired certain special faculties which allow him to defend himself, because he can speak for himself. If he feels the oppression of the adult, he can run away or have tantrums. Nevertheless, the aim of the child is not to defend himself, but to conquer the environment and in it the means for his development. In this later period he must develop by means of exercises in the environment, but what exactly must he develop? That which he has created in the previous period. So the period from three to six years of age is a period of conscious construction when a child takes consciously from the environment. He has forgotten the things and events of the epoch before three years of age, but, using the faculties he created then, he can now remember. The powers he created are brought to the surface by the experiences consciously carried out in the environment by the child. These experiences are not mere play nor are they haphazard, they are consciously brought about by work. The hand, guided by the intelligence, does a sort of work. If then in the first period, the child was a sort of contemplative psychic being, observing the environment in apparent passivity and then taking from it what he needed for his construction, *i.e.*, constructing the elements of his being, in the second period he is following the will. At first it was as if a force outside his will led him ; now it is the

child's own ego which guides him, and now he shows the activity of his hands. It is as though this child who before received the world through his unconscious intelligence, now *takes* it by his hands, using his hands. There is therefore another sort of development : that of perfecting former acquisitions. The development of language for example continues spontaneously to four and a half years, but we have seen that at two and a half years it is already complete in all its details. Now he acquires enrichment and perfection.

Yet though this is a period of perfectionment, the child still retains the embryonic power of absorbing without fatigue. The absorbent mind continues, but now his hand and its experiences help him to develop and enrich further his acquisitions. The hand becomes the direct organ of prehension to the intelligence ; so while the child previously absorbed the world and developed his intelligence merely by walking about, now he must develop by working with his hands ; further psychic development takes place this way. He lives not merely because he has life ; he must have an environment in which to express his work. If we watch the child of this age we see that he is continuously at work, happy, lighthearted, but always busy with his hands. It is called the ' blessed age of play ' ! Adults have always noticed this, though only lately has it been scientifically studied. In Europe and America, where the trend of civilization has taken humanity farther from nature, society offers any number

of toys to correspond to the activity of the child. Instead of the means to create the intelligence, he is given only mostly useless toys. At this age he has the tendency to touch everything, the adults let him touch some things and forbid others. The only *real* thing they let him touch at will is sand, play with sand is stimulated all over the world. Where there is no sand, compassionate men bring it to rich children. If there is no sand or only a little, water may be allowed, but not too much of it, because the child gets wet, and water and sand make dirt which adults have to wash.

Toys and Reality

When the child tires of sand, he is given small copies of things used by adults : toy-kitchens and houses, toy-pianos, etc., but these in a form which render them useless to the child. The adults say : " Children want them ; they see us working so they want to do the same ". But the things they give them to work with are useless ; the copies of fruits are stone fruits, they cannot prepare them nor eat them. It is a mockery. The child is lonely, so he is given a mockery of the human figure, the doll. These dollies are more real than father and mother, all sorts of presents are given to it in clothes, jewels, etc. We know that up to four and a half years the child perfects his language, yet the only being he can freely talk to is his dolly, and dolly cannot answer him.

The toy has become so important in the West, that people think it is a help to the intelligence. It is certainly better than nothing, but if we watch the child, we see he always wants new ones, he breaks them, he develops nervous and moral complaints. People who study the child superficially say that as he breaks the toy, he seems to find delight in taking everything apart and in destroying everything. This is an artificially developed characteristic due to the circumstances which deprive the child of the right things. He is not even quiet with his toys or not for more than a few minutes. It is Nurse who loads the perambulator with toys, and takes them out for the child. When they arrive at the park, the child is often not interested. Very often the child deliberately takes a look at it and then smashes it on the ground. Those psychologists who study phenomena and not their cause, say that the child has an instinct of destruction and another observation that has been made by these superficial observers is that the child does not fix his attention on any of these toys. Both these criticisms of the child are true, but superficial, the cause of this behaviour is not investigated. The real trouble is that children have no real interest in these things, because there is no reality in them. It is the misunderstanding by the adult that has led to this life of lack of attention on the part of the children ; this useless life, a mockery of life instead of real life. The child cannot exercise the energies that nature has given him to perfect his individuality, they

are wasted and worse than wasted. So the result is that the child cannot develop normally and the longer he lives in this environment full of toys, the less capable he becomes of adapting himself to the real environment, and gradually his personality is completely deformed. It is here and now that he seriously and consciously tries to perfect himself through imitation of his elders. His consciousness develops through the experiences of life and these are denied to him, so of course he is deformed.

In countries which have not developed such a toy-civilization for children, you find children greatly different from those of the West. They are much more calm, healthy and cheerful. They take their inspiration from the activities they see around them. They are normal human beings. They take the objects of the adults and use them. When mother washes, or makes bread or chappaties the child does it too, if he has suitable things. It is like imitation, but it is intelligent, selective imitation, it finds real inspiration in those around him ; he is preparing for the environment in which he lives.

There are clearly two periods in this early phase of development :

The first period : 0 to 3 years ; the child absorbs the environment.

The second period : 3 to 6 years ; the child realizes the environment by the work of his hands.

This fact cannot be doubted ; the child must *handle things for purposes of his own.* When, as lately in the

West, toys are made which *are* in proportion to the child so that he can be active with them as the adults are active, then the child changes his character and becomes calm, serene and attentive. This shows that children do not merely play, but are intelligently active. These activities, however, are performed in order to fill a psychic need of the child, not for the need of the environment. This activity has superficially been attributed to an Instinct of Imitativeness ; but it is more than this. One sees that the child does not use objects that are not in his usual environment. Why not ? Because the child's work is to produce an individual who is suited to his environment.

Once this has been understood, one can no longer speak of play with sand and imitation as the essential characteristics of the child, as if the child were a monkey. This imitation is but a means of learning what is in the environment, and nature wishes to give joy in the fulfilment of special things. The new trend nowadays is not to give children toys, but to furnish them with an environment full of things with which they can perform the same actions as the adults of their race and community. We provide motives of activity with objects built in proportion to their strength and body ; and as we usually work at home or on the land, it is necessary that the children have their own home and their own land. Not only toys for children, but houses for them ; not toys for children, but land for them with tools to carry out work on

the land ; not dolls for children, but other children and a social life in which the child is not just seated on a chair and has to be still while the teacher acts, but where he acts himself ; an environment where he can act, talk and find all the instruments necessary for intelligent, constructive activities. All these today substitute the toys of the past.

When this idea, which is just now taking hold of the public imagination, was first expressed, it caused surprise. Prof. Dewey of America, a famous educationist, was persuaded of this idea and set out to hunt for objects proportionate to children. He himself, though a University professor, went to all the New-York stores to look for small brooms, chairs, tables, plates, etc. He found—NOTHING—not even the idea of manufacturing them existed. There were innumerable toys of all kinds ; whole furnished houses of minute size, little horses and carriages, nothing for the child. However, the multiplication of toys did one thing. Dolls which started very small increased until they were almost the size of a child ; and as the dolls grew, the objects for the dolls grew ; they became larger and larger, but never large enough for a child to use really. The child was now almost on the threshold of fulfilment, but the door was yet closed. The adults had spent millions and millions in order to make him happy, and had succeeded in giving him an expensive mockery. We said : " Make all these things a little bigger and the child can use them as he needs to

use them." So the step was taken and the dawn of a new world was realized ; there were real houses and real objects for children to use in order to perfect the preparation that had been made in the previous period from 0 to 3 years. Once the result was seen, these objects were made everywhere, and a new industry and a new source of wealth came into being.

Prof. Dewey was so certain that in New-York he would find the things he was searching for that when he failed to find them anywhere, he said : " The child has been forgotten", and I say, "What a discovery ! " But, alas, he is forgotten in other ways too, he is the forgotten citizen, living in a world where there is everything for all, except for him ; for him only mockery, a desert. He wanders ambling aimlessly, crying in tantrums, destroying the mockeries provided, only seeking for the satisfaction of his soul. And standing in front of him the adult could not see the *real* being of the child.

Once this barrier was broken and the veil of unreality torn asunder, once the child was given *real* things, we expected happiness, readiness to act with the objects, but this was not the only thing which took place. The child showed a *completely different personality.* The first result was an act of independence, as if he said : " I want to be self-sufficient ; keep your aid." This has been one of the revelations that the freed child has given. The child has not become a wealthier being with bigger objects than when he played with toys ; he has become a man

seeking independence. He was a surprise to all around him, nurses, mothers, teachers. He refused help, he wanted to be alone. No one had ever imagined that his first act would have been that of refusing assistance, and that, as he worked, nurses and mothers would have to be observers only.

This environment was not merely proportionately constructed, it was one of which he became master. Social life and development of character came spontaneously. It is not the happiness of the child that is the aim, but that he become the constructor of man, independent in function, the worker and master of his environment. *This is the light that the beginning of the conscious life of the individual reveals.*

CHAPTER XVII

THE NEW TEACHER

THE problems facing village education, especially in countries like India, the primitive circumstances under which such work is started, might be something similar to what happened in the beginning of my work which was very surprising to all. I believe that the facts which we were fortunate enough to witness would not have happened but for certain circumstances. No one else in the world has recognized them, because if Prof. Dewey, for instance, had found the objects he was seeking in the stores of New-York and had been able to organize a house for children with all these activities, nothing would have happened, as nothing happens in so many schools which are richly endowed. Nothing would have happened as objects are not enough. It is not lack of objects alone that matters, but certain other things as well that obscure the real characteristics of children. What will happen cannot be foreseen, because what is needed is *freedom* for the child and not wealth, and that freedom we cannot understand unless we experience it. No one

could have seen it in my experiment but for a chance which gave the necessary conditions. They were :

1. *Extreme poverty* and a social condition of extreme hardship. It was not a class of working people among whom we worked, those were rich compared with the parents of the children I had. This extreme poverty was a favourable condition. The child who is extremely poor may suffer from lack of food, but he finds himself in natural conditions. Now that we see that the development of the child is directed by natural laws, we see that the child who has a greater number of natural conditions has much greater opportunities to reveal his inner wealth than one living in rich, artificial conditions.
2. *The parents of the children were illiterate*, therefore unable to give help to their children in learning.
3. *The teachers were not teachers.* If they had been real teachers, I do not think these results would have been achieved. In America they never succeeded so well, because they looked for the best teachers. Who is believed to be a good teacher ? It means usually one who has studied all the things which do not help the child ; such teachers are full of prejudices and ideas about the child which are not conducive to giving freedom to the child. As is the case

with a 'good' nurse who thinks she must help the child to do everything, so these teachers think they must help the child's mind. It is this teaching, this imposition of the teacher on the child, which hinders him.

Who would have thought of imposing the three conditions mentioned above in order to have a successful experiment? One would naturally have thought to give just the contrary.

The great success which we obtained augurs well for similar attempts and experiments in India, because one of the complaints is the lack of good teachers. One must take simple persons and make use of them. In Indian villages also the parents are probably illiterate, so much the better for the children. And as to poverty, it is universally recognized as the first condition for the development of spiritual qualities. It is difficult to tell all to give up their riches, and it might not work, but religious leaders in all countries have renounced the world and sought poverty. We need not impose poverty, but it must not frighten us, as it is the most favourable condition for spiritual development we can find, if accepted with assent. If we want to experiment in giving freedom to the child, the field of poverty is the best. If one wants an easy experiment and sure success, go and work among the poor children. We offer them objects and an environment they do not possess. An object scientifically constructed, offered to a child who has nothing, is

taken with passionate interest and awakens mental concentration and meditation. Forty-two years ago this fact caused great surprise. Concentration had never been recognized in children of three years, yet it is a basic factor because it means to take intense hold of the environment, item by item, exploring each one of them and dwelling on each of them. Under the usual unsatisfactory conditions, the child flits from one thing to another and concentrates on nothing, but that is not his characteristic, it is forced on him by an unsatisfactory environment.

Also, in a small child of three years that mysterious teacher which urges the child to work is still active within him ; and when we speak of a free child (*i.e.*, with inner freedom) we speak of a child free to follow the powerful guides of nature within him. These guides are extremely wise, and lead the child to seek exactness, precision and the full achievement of what he undertakes. The child is led by nature to go into *all* the details (*e.g.* to dust the top, sides, bottom and all the groves of a table). This is what we want for success in education. What any teacher requires of his pupils is attention and concentration on what the teacher does, so that they can carry out exactly any instruction and all is done completely. This is the maximum any teacher can expect in order to have success. The surprising revelation that the children have given us is that this is the natural behaviour when a child is free. Given freedom

and no interruptions by the teacher, he performs full, complete, concentrated work. At this age of three years, he does not receive with facility from others, because he is constructing himself. Too many teachers are inclined to put so many things before the child, to interrupt him continuously and teach continuously, instead of letting the children have their own experience. The child of this age, therefore, who develops by spontaneous work, following the guides of nature, cannot develop in this fashion with a teacher who teaches. Also the teacher aiming at success (*i.e.*, that the child do what the teacher thinks important, such as obeying her or him) and convinced that she must go from the easy to the difficult, from the simple to the complex, by gradual steps, when instead a child goes from the difficult to the easy and with great strides ; such a teacher is not a help in our work, and most teachers are like that, because they have been trained so. Inevitable conflict would arise between the child and such a teacher. Another prejudice such teachers have is that of fatigue. If a child is interested in what he is doing, he goes on and on. The child is not fatigued. When however the teacher makes him change every few minutes and 'rest', he gets fatigued. As the completed cycle of physical activity gives added strength to the very little ones, so do mental activities with the older ones.

These prejudices are so impregnated in teachers educated in the usual type of Training Colleges, that to get rid of them, you would have to kill the teacher. No new

vision of the mind would get rid of them. It is the same with some of the prejudices of society, nothing short of a bloody revolution can help. Some of the most modern Colleges have this prejudice of the need for rest so badly that they have interruptions and rest every three quarters of an hour or half an hour on a carefully graduated plan. The result is extreme indifference in the minds of the people educated. Interest and enthusiasm only can produce anything of value and these are automatically killed. Modern pedagogy sees things from a superficial and erroneous point of view, because it takes no notice of the inner life. The guide of the psychic activities is completely ignored. Also the pedagogical world (or it leaders) is ruled by human logic, but human logic is one thing and the logic of nature another. Human logic says we must distinguish between mental and physical activities, for mental work we must be immobile in a class room and for physical work the mental faculties are not required. It cuts the child in two. When he thinks he may not use his hands, and when he uses his hands his head is not considered. Thus we get men with a head and no body at one time and with a body and no head at another. Consequently there are problems and trouble of all sorts for the teacher. Yet nature shows that the child cannot think without his hands and that the hands are the instruments of intelligence. Objects must occupy the hands and interest the mind. Our experience has shown us that, when the child thinks, he is continually moving.

So indeed great men often give us the thoughts they gained as they walked about, meditating (*cf.* the peripathetic school of philosophy). What do people who philosophize do ? They go into convents and walk hours alone under trees, meditating. In this period between three and six years, it has been clearly revealed that movement and mind go together ; yet many think it is impossible to have schools where children study and continuously walk about.

From this we can realize that a well-prepared teacher (in the usual sense) is the worst teacher for the child. The greatest effort in our method is that of trying to free the teacher from the prejudices he or she may possess and the greatest success is the teacher who can best free herself or himself from them. The measure of how well they succeed is seen in how far they are still cloaked by prejudice. So if education of a great number is envisaged and there is a scarcity of teachers, what can we say but : " Thank God ! " It is one of the best conditions.

The new teachers found among simple folk must understand certain *fundamental* things which, however, are not difficult. In my first experiment I instructed the ' teacher ' (who was the daughter of the door-keeper of the tenements) to take certain objects and to present them in a certain fashion to the child and then to leave the child alone with them and not to interfere. Uneducated as she was, she was able to do this exactly. A full-fledged teacher would probably have been unable to do

that. In the first place he might have thought it below his intelligence and, even if he had done it, he would not have done it so simply. He would have launched a verbose attack of explanations on the class, whereas anything beyond the *necessary and sufficient* causes distraction and confusion. My uneducated 'teacher' did exactly what she was told and, to her surprise and mine, the children worked and worked with these objects with wonderful results. She was so surprised that she thought there were angels or some spiritual agencies at work. Then the children exploded into writing when she had taught them nothing of writing and when visitors came and asked the children: "Who taught you to write?", they would say: "No one taught us to write". She would add in an awed manner: "No, I haven't taught him to write". She would come to me, half-frightened, to say: "Madame, at 2 o'clock yesterday the child started to write!" She could not understand how he could write at 2 o'clock, and perfect sentences in beautiful handwriting too, when he had not written anything in his life before, even up to 1 o'clock. We had given them the cursive letters, then we thought they might find reading easier if we gave them letters of the print-type, but before we had them prepared, the children were already reading books and did not need them. Now, after forty-two years, we know that these explosions occur and can understand why they occur. These incidents, however, happend before

we knew the reason of them. Now we know that the child is endowed with an absorbent mind which takes from the environment without fatigue, so that culture, if properly prepared and presented, can be taken as the mother tongue is taken, with the greatest ease. The only thing necessary is to construct a material, scientifically exact, which can be handled by the children. Then a great many items of culture can be brought down to the period of three to six years of age.

Experience has shown that the teacher must withdraw more and more, therefore the task of those who have to train these teachers is easy. Tell them : "Do not do anything, but prepare for the children ; they will work." It brings into actual fact a great truth : "Self-renunciation can bring great truths." Our task is to *teach the teacher where he or she intervened needlessly.* We call this part of our work 'the method of non-intervention'. The teacher must measure what is needed and limit her work to that, like a good servant carefully prepares a drink for his master and then leaves it for his master to complete the work, *i.e.*, drinking it. He does not force his master to drink, that is not his business. His business is only to prepare. So must the teacher act towards the children. It might be good to send teachers to study with a good servant so that they might learn to be humble ; not to impose themselves on the child, but to be vigilant and prepare all for the child and then put it at his disposal and leave him.

People who are in charge of children of this age have to serve the psychic needs of the children. It is not indispensable to know them scientifically. If we say to a mother : " Carry the child of one year always with you, so that he may see the world, and take him where people talk so that he may hear his mother tongue ", the mother can understand and the teacher can explain it very easily. Also the teacher can tell the mother not to carry a child when he is old enough to walk, not to be afraid of letting him carry heavy things if he wants to do so. All these things are easy to understand if the mind is not encumbered with prejudices.

It is difficult perhaps to understand the *psychological reasons* for all this, but the *practical things themselves* are not difficult to tell or to understand, just as putting a seed in the ground or looking after a plant does not require the effort of studying vegetable biology in the University. We must distinguish between the practice of nature, and the science that man has built round that practice. Practice is easy. All the marvellous results always come from the expenditure of the spontaneous energy of the child which is usually impeded in ordinary schools.

Let us consider the illiteracy of the parents. Illiteracy brings about other conditions of ignorance, so that when the child comes home and shows how he can wash his hands, the mother thinks : " How clever he is ! " and the child is uplifted. Also when the

child whose mother and father cannot write, writes his first word, their adoring admiration again brings uplift to the child, whereas the richer parents will probably say : "Oh ! ah ! yes !, but do they teach you art at school ?" and the child is chilled and loses interest. Or if a child dusts something the better-class mother kills the joy of the little one, because she says it is sweeper's work and she did not send her child to school to learn that. Or if it is mathematics he learns, she is afraid he will get brain-fever and wants to stop the work. So either the child gets an inferiority-complex or a superiority-complex and thinks it is not necessary for him to do certain things. The real problems are with the literate, cultured parents and if they are pedagogues themselves, so much the worse, because then they think they know all about education.

A Social Problem Solved

The conditions, therefore, which we think bad for an experiment, are really good. Success will not limit itself to the children, it will influence the parents. In my first experimental 'House of Children' when they had started doing exercises of practical life and were interested in the details of them, they would tell their mothers that they must not have spots on their dress and must not spill water. "You do it like this", so the mothers began to care for their dress and appearance. This shows the power the child has of transforming the environment. It

is the child probably who is the only force who will lead illiterate persons to educate themselves. The parents in my first 'House of Children' came to me to learn how to read and write, because their children could do it. In dealing with children of this age one handles almost a magic wand in social life. First there is the marvel of the transformation of the child himself, secondly there is the touching marvel (it causes emotion) that the child is able to do much more than one had expected, and this rouses in the spirit of the adult a sort of reverence for the spirit of childhood, hence it achieves a transformation and an education of the adults.

If one envisages a social reform on a large scale and plans according to the old method, one has to make a plan covering many years (the Sargent Scheme covers 40 years). If one has to prepare teachers with all the prejudices of psychology all over the world, we can calculate how long it will take to train them. These teachers begin with children of seven who have passed the sensitive stage and being faced with this dead-weight (the children do not possess the enthusiasm natural to the little ones for the same things) they force and force and the children become more and more bored. The child who, before, had at least a relative freedom, now finds himself under a teacher who fusses and tells him to do this, that and the other. It will take forty, eighty, a hundred years, two centuries perhaps before the work is completed. If, on the contrary, we consider these psychological facts which

are easy to practise, then things are not so difficult, because we tap and make use of natural energies which always exist. It is necessary to understand the child at different ages, certainly, but then practically all is done. Such facts as the smaller child's better memory than the older one's, for instance, when remembered, make things quite simple.

We see that the child learns better than with the old methods and that the whole of education is shifted downwards, towards birth, from eight to four years. Thus so many years are saved and as the absorbent mind and the sensitive periods are functioning at this age, which means that all things are taken with interest and enthusiasm, the *wish* to continue is present and education does not have to be imposed.

What about the teacher? She will work long hours with the children since the children do so, but in a very different way. Once a teacher has become a good teacher in this sense, she is happy. A newspaper-man in America once visited his cousin, a Montessori teacher, and found her lying on a deck-chair and thought she had vacation. She told him to be quiet and not to disturb the children. He could not see or hear any children, but looking through a window he found them all working quite happily without any noise on the lawn. Children educated in this way will always work, also without the teacher if she is late or away. The possibility of a reform on a large scale is much more rapid and easy to attain in this way.

In my first experiment I used to give instructions to the teachers once a week and after ten months there was the explosion into writing. Today our observations have made it plain to us how these miracles happened, but when they happened we did not know the reasons, so it is not indispensable to know them. If we put a plant in the earth, we must know how much soil and water it wants, and then water it regularly. Then, one day, we shall see the flower coming. We do not need to know the anatomy of the flower or the acidity of the soil, etc. We only have to wait in patience and look for the flowers. So with the education of children, all that is necessary are adults, simple and of good will.

In all countries where children live in a simple, natural way, in so-called backward countries, where education seems to present the greatest problems, the great miracles of our early experiments will easily be repeated and a great and urgent problem solved. Simple teachers are perhaps better than others and all these little children will lead the rest of the world. Those who feel the appeal of this work must not be afraid of the task : what must be kept in mind are not the difficulties of the theories we have given, but the vision of the first experiment before any of these theories were developed.

CHAPTER XVIII

FURTHER ELABORATION THROUGH CULTURE AND IMAGINATION

THE period between three and six years is most interesting ; it follows the period of the spiritual embryo (0 to 3 years). The passage between these two periods is not very marked. Usually only one period is considered, the period from 0—6, but it is really divided into two parts. The first part concerns the creation of the psychic life, and the second part is a sort of period of perfectionment or fixation. Certain faculties developed in the first period are rendered secure. Also in the first period there is a prevalence of the unconscious part, whereas in the second period consciousness guides development. It is, therefore, not only a period of fixation, but of greater perfection. We no longer have the embryo, but man who is completing himself. The second period shows a special form of activity, because consciousness falling upon the world grasps the world and handles it, and in this handling the conquests that were not clear before, become clear and perfect. The child not only takes in the environment,

but realizes himself. This is the period in which the conscious individuality is established and this is done spontaneously. It is still a period forming part of creation and is still closed to outside influences such as an adult mentality trying to impose or transmit something directly. The child, therefore, cannot be educated in the ordinary sense of the word by a teacher, but education must come through the natural bases. The natural laws of development compel the child of this age to experiment on the environment by the use of his hands, both in cultural and other matters. It is the passage from nothing to life. Only recently this has become known, before then the whole psychic life of the child was buried under the indifference of humanity to him. Now it has made itself suddenly known to those who did not know of it.

It was the explosion into writing that first caught the attention of the public to the child's psychic life. It is not an explosion of writing only, the writing was like the smoke out of a pipe, the real explosion was of the human self in the child. He might be compared to a mountain which seems to be solid and eternally the same, but contains a hidden fire. One day there is an explosion and out comes the fire through the outer heaviness. It is an explosion of fire, smoke and unknown substances, from which those who can see, will be able to tell us what the earth contained. Our explosion was similar and it happened because of circumstances which, as I explained in the previous chapter, were the least favourable

(apparently) for such a revelation. These revelations came also on bases which were 'non-existent.' The poverty and ignorance, the lack of proper teachers, syllabus and rules were basic 'nothings'. We found nothingness, and because there was nothingness, the soul was able to expand itself. The obstacles had been removed, but no one knew (at that time) what the obstacles were. It is well to understand this, because in the child lies a great energy—a latent cosmic energy. It is important for us to know this, because if we know it is there and wait for its flashing revelations, we are on the road to success. It was not a method of education which caused these explosions, because the method did not exist when the explosions occurred. The following up of psychology and the building up of the method came as a *result* of these volcanic revelations of the children. The explosion came as the result of a discovery not of a method. The Press spoke of it from the first as of a 'discovery of the human soul.' From it sprang the new science which followed step by step the revelation of the children.

I will explain these phenomena a little. They are facts, they should not be attributed to intuition, but to perception. I have described what I saw. The facts seen are the foundation of the new science ; these facts can be found in my previous books.

Two groups of facts are important in these revelations, one is that the mind of the child is

capable of acquiring culture at a period of life when nobody would have thought it possible, but can only take it by his own activity. Culture cannot be received from another, but only through the work and increased realization of oneself. Nowadays, when we are aware of the powers of the absorbent mind during the period from three to six years, we know this possibility to take in culture at a very early age. The other important group of facts deals with the development of the character. Development of the character has pre-occupied education at all times, but all educators have agreed that the age from three to six years is not the age to influence character in a systematic fashion. No one thinks of real discipline for children so young ; only later can discipline be imposed. Also it was thought that it was the adult who had to influence the character of young people and the problem of changing evil into good is an eternal problem. We were wrong : this *is* the time for developing character, but the child must develop his own character according to the laws of growth. We have already seen a great deal of how the mind is formed, but it is interesting to dwell in some detail on the contents and working of the mind at this period and we shall deal with the formation of character in another chapter.

The child is especially interested in and concentrates on those things he has already in his mind, those that were absorbed during the previous period, for whatever

has been conquered has a tendency to remain and the mind dwells on it. So, for instance, the explosion into writing was due to the special sensitivity for, and conquest of language. As the sensitivity ceases at five and a half to six years, it was clear that writing could be achieved with such joy and enthusiasm only before this age, while older children of six or seven were not capable of doing this and did not feel the same enthusiasm. So our method came from the observation of the children, from the observation of facts. It was seen that children had prepared the organs necessary for writing previously, so indirect preparation was adopted as an integral part of the method. Thus certain bases of the method could be fixed. We had seen that nature prepares indirectly in the embryo ; she does not give orders until she knows that the individual has the organs which enable him to obey. That is why the child cannot do anything by mere imitation and obedience ; it must be provided with the means to be obedient. Both mind and character were helped by the observation of these facts. Earlier it was thought that all that was needed was good example by the adult and good will from the child, but the adults lacked a wisdom that nature possesses, *i.e.*, that the means must be prepared for the command to be obeyed, and this is not done directly. To receive frequent and successive commands does not create obedience ; obedience is attained indirectly by inner preparation. Obedience to arbitrary

commands of the adult cannot achieve development. The child has in himself such a fountain of wisdom to guide him, that it is evident that frequent and ill-founded interference by the adult is not a help, but an obstacle to his development. The necessity of a prepared and well organized environment for the child and freedom for the child to expand its soul within it stands out very clearly now.

If, as we found, the child again takes up the conquests of the first period in order to elaborate them in the second period, the first period can furnish us with a guide for the second period which follows the same method of development. Let us take language : in the first period we have seen that the child follows a method which is almost grammatical : he successively absorbs and uses sounds, syllables, nouns, adjectives, adverbs, conjunctions, verbs, prepositions, etc. We then know that we should help the child in the second period by following the same grammatical method. The first teaching is that of grammar. It seems absurd to our usual way of thinking, that teaching should begin with grammar at three years of age, and that before he knows how to read or write, he should learn grammar. If we stop to think of it, however, what is the basis of construction of a language if not grammar ? When we (and the child) speak, we speak grammatically. If, therefore, we give him grammatical help at four years of age when he perfects his language in construction and

enlarges his vocabulary, we give a real help. By giving him grammar, we allow him to absorb more perfectly the language spoken around him. Experience has shown us that these children were keenly interested in grammar and that this was the right time to give it. In the first period (0 to 3 years) the acquisition was almost unconscious ; now it has to be perfected consciously by conscious exercise. Another thing we noticed was that the child of this age acquires a large number of words ; there was a special sensitivity and interest in words and he spontaneously took in any number of new words. Many experiments were carried out and it was seen that all children considerably enriched their vocabulary at this age. The words acquired were those used in the environment of course, so a cultured environment gave a child the opportunity to learn many words ; but in any environment the instinct was to absorb the greatest possible number of words ; the child had a hunger for words. In a cultured environment he can take thousands and thousands of words. To give many to him is a help at this age. If unaided he takes them with effort and without order ; the help will consist in reducing the effort and giving order.

Another detail in the method was established as a result of this observation, to give many words. The uncultured 'teachers' we had in our first experiment noted this fact and they wrote words for the children. They wrote as many as they knew, but presently they

came to a halt and they came to me and said that they had given all the words relating to dress, house, street, names of trees, etc., but the children wanted more words! So we thought, why not give to the children at this age the words necessary for culture, *e.g.* all the names of the geometrical figures they had been handling in the sensorial apparatus, polygons, trapezium, trapezoid, etc. The children took them all in one day! So we went to scientific instruments, thermometer, barometer, etc. Then we gave them botanical names, sepals, petals, stamens, pistil, etc. They were all taken in with enthusiasm. "Do you not have any more?" they asked, and the teachers complained that when they took them for a walk, they knew the names of all the motor cars which we, of course, do not know. The thirst for words is insatiable and the power for taking them inexhaustible, while in the period that follows this is not the case. Other things develop then, but there is difficulty in later periods to remember strange words. We found that our children who had the opportunity of learning these words early, recalled and remembered them easily when they found them later in the ordinary schools, at 8 or 9 or even 12 or 14 years, while those children who then met them for the first time found it difficult to remember them. So the logical conclusion is to give scientific names at this age, of 3 to 6 years. They are not given mechanically of course, but in connection with specially prepared apparatus, so that they are based on real

understanding and experience. To us foreign names are long, complicated and difficult to remember, yet the foreign child says his name with the utmost ease. In Italian there are many strange names for foreigners, but there is no difference for the Italian child between these and other words like triangle. To help this remarkable thirst for words in the children we give them the words of the various classifications in all subjects, botany, zoology, geography, etc., like the different parts of a leaf, of a flower, of geographical features, etc. They are all easily represented and apparent in the environment and therefore most suitable. They offer no difficulty. The difficulty was with the teachers who did not know these words and found it difficult to remember which was which.

In Kodaikanal I once saw older children of 14 years of age, who were studying in the ordinary school, puzzled over the name of a part of the flower, a tiny child of three years said: "pistil", and ran off to play. The child of this early age does not take words indifferently as any ordinary easy thing; it is as if a light is lit in the child and he is profoundly interested. We showed to older children of 7 or 8 years the classification of roots according to the botany books and a small child came in and asked of an older child what were the new charts on the wall. He was told and later we found plants pulled out of the garden, because the tiny ones were so interested that they wanted to see which roots those plants had.

When we saw their interest, we gave this knowledge to them and then the parents complained that the children pulled up the plants in their gardens, washed them and said they wanted to see roots.

What is the limit of the words the children will learn ? I do not know ! Does the mind of the child limit itself in taking in objects and the facts about the things they can see ? No ; the child has a type of mind that goes beyond concrete limits. It has the power of imagining things. This power of visualizing things that are not present to the eye, reveals a higher type of mind. An object I can see is an easy thing to know, but when I have to make an image for myself (to imagine) it is more difficult. If the mind of man were restricted only to the things he could see, it would be very limited indeed. Man sees without seeing ; culture is not made up of the knowledge of things seen. Geography gives an example. If we have never seen a lake or snow, we have to imagine them, imagination has to be put into activity. Up to what point can children imagine things ? We did not know, so we began with some experiments starting with children of 6 years. We saw that they did the opposite of what we imagined. We had thought they would be interested in big things, but they were interested in the details. We took the globe ; they knew the world, they had heard of it so much. 'The world' is a phrase to which no sensorial image corresponds, yet the child forms an idea of what it is, which shows that he has a

power of imaginative understanding, of abstraction. We prepared special small globes. We covered the earth with "star dust" and the oceans with deep and bright blue. The children began to say: "This is land", "This is water", "This is America", "This is India". They loved the globe so much that it became a favourite object in our classes. The mind of the child between 3 and 6 years fixes not only the functions of the intelligence in relation with objects, but also those of imagination and intuition. This means that the intelligence must have a great and vivid power at this age beyond that of merely absorbing through the senses. It has a higher power, that of imagination, which enables the individual to 'see' things he cannot see. This may seem an exaggeration in relation to children of this age, but if we think about it, we realize it is not such an exaggeration, since psychology has always said that this is a period of imagination. Even the most ignorant people tell their children fairy tales, and they love them immensely, as if they were anxious to use this great power of imagination. They call a table a house, a chair a horse, etc. Everyone realizes that the child likes to imagine, but he is given tales and toys as the only help. If the child can realize a fairy and visualize fairyland, it is not difficult for him to visualize America, etc. Instead of only hearing vaguely about America, a globe with the general shape of America is a concrete help to his imagination. Imagination is endeavouring to find the *truth* of

things, a fact which is often forgotten. If in the child's environment the word 'America' or 'World' had never been mentioned by anyone, then it might be difficult for him to show interest in it, but since he hears the word so often, it enters his mind and he clothes it with imagination. The mind is not the passive entity one imagines, the mind of man is a flame, an all-devouring flame, it is never still, but always active.

When those children of six years had the globe and were talking about it, a child of three and a half came in and said: "Let me see! Is this the world?" "Yes", said the older ones, a little surprised, and the child of three and a half said: "Now I understand, because I have an uncle who has gone three times round the world. How was it round? How did he go? Now I understand." At the same time he realized this was only a model for he knew the world was immense; he had taken it from the conversation round him.

We had a child of four and a half, who also asked to see the older ones' globes and he looked steadily at one. The bigger children were talking of America, taking no notice of him. Presently the tiny one interrupted them: "Where is New-York?" The older ones, surprised, showed it to him. Then he said "Where is Holland?" Still more surprised, they showed it to him. Then, touching the blue part, he said: "Then this is the sea." The older ones were interested, so the little one said: "My father goes to America twice a year; he stays in

New-York. After he has started, Mother says, " Papa is on the sea ". For many days she says it ; then she says : " Papa is in New-York ". Then after a while she says : " He is on the sea again " and then one day she says : " He is in Holland, and we go to meet him at Amsterdam ". He had heard so much about America, that when the older children were talking about it, he was very eager to know about it and felt : " I have discovered America ". And what a rest it must have been for him, for he had been trying to find an orientation in the *mental* environment as he used to do in the physical environment. In order to take the mental world of his time, he has to take words from the adults and cloak them with images. This is the fact.

Playing with toys and imagination through fairy tales represent two needs of that special period of life : the first, to place oneself in direct relation with the environment, to master the environment, and by this a great mental development is acquired by the child. The other reveals the strength of the imagination, so much so that he turns it on his toys. If we then give him *real* things to imagine about, this is a help to him and places him in more accurate relation with his environment too.

At this age children often want information. They ask questions to know more of the truth of things. It is well known that the child is curious, always asking questions. If all these questions come together, it means that the child is in need of knowledge. The questions of

children are also interesting if one consider them not as a nuisance, but as the expression of a mind seeking information. Children of this age are not able to follow long explanations, so we do not give him a long explanation of the world, but a globe. Usually people give too exhaustive explanations. A child asked his father once why the leaves were green. The father thought how intelligent his child was, so he gave a long explanation of chloroplasm and chlorophyll and of the blue rays of the sun, etc. Presently he heard the child mumbling and listened ; the child said : " Oh, why did I ask Papa ? I want to know why the leaves are green, not all this about chlorophyll and the sun ! "

Play, imagination and questions are the three characteristics of this age ; this is known by all and misunderstood by all. Sometimes questions are difficult like : " Mamma, where did I come from ? " but the child has reasoned to come to this question. An intellectual lady who guessed beforehand that her child would ask this question one day, determined to tell him the truth and when the child asked her the question at four years of age, she said : " My child, I made you ". The answer was quick and short and the child was immediately quiet. After a year or so she told him : " I am making another child now ", and when she went into the Nursing Home, she said she would come back with the child she had made. When she arrived back, she said : " Here is your little brother ; I made him as I

made you". By this time the child was six years old, so he said: "Why don't you tell me really how we come into the world? I'm big now; why don't you tell me truth? When you told me last time you were making a child, I watched you, and you did nothing." Even telling the truth is not as easy as it seems, so it needs a special wisdom on the part of teachers and parents to know how to help this imagination.

The teacher requires a special preparation, because it is not our logic that solves problems. In no point on which we have touched, does our logic help, we have to know the child's development and to shed our preconceived ideas. Great tact and delicacy is necessary for the care of the mind of a child from three to six years, and an adult can have very little of it. Fortunately the child takes more from the environment than from the teacher. We must know the psychology of the child and serve him where we can.

CHAPTER XIX

CHARACTER AND ITS DEFECTS IN YOUNG CHILDREN

THE education of character was one of the most important items in old pedagogy ; it was one of its main aims. At the same time no clear definition of what is character was given, nor of the way to educate it. Old pedagogy only said that mental education is not sufficient, practical education is not sufficient ; character is needed, but it is an unknown quantity—X—. These old educationists have some intuition of it, for what they really mean is the realization of the value of man, but when you go to these values, there also they are not clear. Like many other things in education, it is vague. Value is given to certain things, such as the virtues : courage, constancy, certainty of what one ought to do, moral relations with one's neighbours. In the question of character moral education plays a part.

All over the world we find the same vague ideas. It seems to me that this question must be looked at from a different point of view, and instead of speaking about

the education of the character we ought to speak of the *construction* of the character, the development of the character in and through the effort of the individual. A demonstration of this active creation of the character, not its education from outside, was shown by the children in my first school. Let me illustrate some points of this construction, which give a new idea to education.

From the point of view of life, we could consider everything about character as behaviour in man. As I have mentioned before, the life of the individual from 0—18 years can be divided into three periods : 0—6 years (with which we deal in this book), 6—12 years and the last period form 12—18 years ; each again divided into two sub-phases. In considering each of these groups, the type of mentality which each represents is so different that they might appear to belong to different people.

As we have seen, the first period is a period of creation ; it is here that the roots of character are to be found, although when the child is born he has no character. The period from 0—6 years is therefore the most important part of life regarding character too, since here it is formed. Everyone has recognized that at this age the child cannot be influenced by outside example and pressure, so it must be nature herself that lays the foundation of the character. The child at this age has no understanding of or interest in what is good or bad ; he lives outside our moral vision of life. This is recognized, because we do not call the child of this age evil or bad,

but naughty, indicating that this behaviour is infantile. We shall, therefore, not speak of evil and good or of morality in this book because those terms have a different meaning at this age. I mention this, because people ask all kinds of questions as to the use of the good example of forefathers, of patriotism, etc. They are important, but they do not concern this age ; in the second period (6—12 years) lies the beginning in the child's consciousness of the problem of good and evil, not only in his own actions, but in, and among, other people too. The question of good and evil comes into the light of consciousness as a special characteristic of this age : the moral conscience begins to form itself ; later it leads to social conscience. In the third period (12—18 years) comes the feeling of patriotism, of belonging to a group and of the honour of the group. I mention this now to make clear that it does not belong to the age of 0—6 years.

I mentioned above that, although the character of each period is so different that it seems to belong to different people, yet each period lays the foundation for the next period. In order to develop normally in the second period, one must have lived well in the first period. It is like the caterpillar and the butterfly which are so different to look at and so different in their habits ; yet the fineness of the butterfly is attained by the true life of the caterpillar it was before, and not by imitating the example of another butterfly. *In order to construct the future one must attend to the present.* The more fully one

period is lived as regards its needs, the more successful the next period will be.

Life begins at the conception of the individual. If conception is brought about by two pure beings, not by alcoholics or drug-addicts, etc., then the resulting individual will be free from certain hereditary taxations on life. The right development of the embryo depends on the conception. For the rest the child can be influenced, but only by the environment, *i.e.* during gestation, by the mother. If the environment is favourable, the result is a strong healthy being. A fact worth considering is that this conception and gestation have an influence on the nervous system of the child (that is the reason why, if a shock or accident happens, he may become an idiot), so what happens after birth is due largely to the period of gestation. The first important thing in life is therefore conception, then gestation, then birth. We have mentioned the shock at birth and that this might give rise to regressions ; these characteristics of regression are serious, but not so serious as alcoholism or hereditary illness (as epilepsy, etc.). This shows us that, as we go on, the danger of the obstacles grows less and less, but the characteristics are always of a psychic kind. They influence the individual either in the direction of regression or in that of independence.

After birth come the three important years which we have already studied. During these two or three years, there are influences that can alter the child and alter

his character in after-life, *e.g.* if the child has had some shock or met too great obstacles during this time, phobias may develop or we may have a timid or melancholic child. The character, therefore, develops in relation to obstacles or freedom from obstacles during this period. If during conception, gestation, birth and this period the child has been treated scientifically, then at the age of three years the child should be a model individual. This ideal of perfection is never fully attained as, amongst other reasons, during these developments the child has met with many accidents. At three years we meet with one or fifty or a million children with different characteristics. We have so many different results of different experiences and these different characteristics are of different importance according to the seriousness of the experience. If the characteristics are due to difficulties after birth, they are less serious than those of the period of gestation, and these in their turn are less serious than those of conception. If they are due to the post-natal age, they can be cured between 3 and 6 years, because then perfectionment is attained and defects are adjusted. If, however, the defects are due to shock at birth or earlier, then they are very difficult to correct. So there are certain imperfections that may appear, but there is an active period of perfectionment and the erasure of certain defects of post-natal life is possible, but idiocy, epilepsy, paralysis, etc., which may even be hereditary cannot be cured by any help we can give. It is interesting to know

that all but these organic difficulties can be cured, but if these defects, developed from 0—3 years, are not corrected now by treatment at the age of 3—6 years, they will not only remain, but will be increased by the wrong treatment during the period from 3—6 years. Then, by the age of 6 years, there may be a child with the defects of the period from 0—3 years strengthened, and with the newly acquired difficulties of the sub-phase from 3—6 as well. These in their turn will have an influence over the second period and the development of the conscience of good and evil.

All these defects have a reflection on the mental life and on intelligence. Children are less able to learn if they have not met with good conditions of development in the previous period. A child of six years of age, therefore, is an accumulation of characteristics that may not be really his, but are acquired under the influence of circumstances. If a child has been neglected from 3 to 6 years, he may not have the moral conscience that develops from 7 to 12 years or he may not have the normal intelligence. We then have a child with no moral character and no ability to learn, more troubles are added, and he is a man with scars due to the difficulties he has gone through.

In our schools (and in many other modern schools) we keep a record of the biological details of each child in order to see how to treat the child. If we know the troubles of the different periods, we can orient ourselves

as to how serious they are and how to treat them. We therefore ask the parents if there is hereditary illness, we enquire after the age of the parents at the birth of the child, make tactful enquiries as to the mother's life during the period of gestation, whether she had falls, etc. Then, if the birth has been a normal one, whether the baby was well or suffered from asphyxia. There are the questions regarding the home life of the child, if parents have been severe or if the child has had shocks. If we have problem-children or naughtly children, we try to find a reason for it in the life the child has led previously to that time. When they come to us at three years, almost all of them show strange characteristics, but they are curable. We can briefly consider the familiar types of these deviations.

All these manifestations which are faulty and not normal, enter the field of what is usually called character. All children are different and the general idea is that each child must have a different treatment to cure his defects, but we distinguish two main groups of faulty characteristics, one belongs to the strong children who fight and overcome obstacles and the other group to the weaker ones who succumb to adverse conditions.

Defects of the Strong Children

Violent tantrums, anger, acts of rebellion and aggression. One of the most common features is disobedience and another is destructiveness. Then there is the desire

for possessions ; so we have selfishness and envy (the latter not manifesting itself passively, but by trying to have what other children have). Inconstancy (very common in children) ; incapability of attention ; inability to co-ordinate the movements of the hands so that they drop and break things ; a disorderly mind and strong imagination. Also they frequently shout, shriek and make loud noises ; they interrupt and they tease and torment and often are cruel to the weak and to animals. Frequently too they are gluttons. These are a few of their troubles.

Defects of the Weak Children

These are of a passive type and have negative defects such as sloth, inertia, crying for things and wanting people to do things for them ; they want to be amused, are easily bored. They have a fear of everything and cling to adults. Then too they have the fault of lying (a passive form of defence) and of stealing (a passive form of grabbing other's possessions,) and many more.

There are certain physical characteristics which are concomitant with these difficulties ; *i.e.*, these physical defects have a psychic origin, but are confused with real physical illnesses. One of these is the refusal of food and loss of appetite ; the contrary defect is indigestion due to gluttony ; both are of a psychic origin. Then there are nightmares, fear of the dark, agitated sleep which in their turn affect the physical health and then

anaemia results. Certain forms of anaemia and liver trouble are due to psychic facts. There are neuroses too. All these have a psychic origin, as is shown because no medicine can cure them.

All these characteristics enter into what is called moral problems and behaviour. Many of these children (especially the strong type) are not felt as a blessing in the family, the parents try to get rid of them and hand them over to nurses or schools and they become orphans with their parents living. They are ill with a healthy body. This leads to the depression of life called naughtiness. They are problems and their parents want to know what to do with them. Some ask questions, some try to solve their own problems. Some adopt severity convinced that if you stop them at once, they will be cured, these defects checked as soon as they appear will not develop, they think. All means are used : slapping, scolding, sending them to bed without food, but it is found that they become more ferocious and bad, or develop the passive equivalent of the same defect. Then the persuasive line is tried, we will reason with them and their affection is exploited : " Why do you hurt Mummie," or one washes one's hands of the whole thing, and leaves them alone. Discussions start : " My sister's children do what they like and see what they are ! " " What about your children ? " " Oh, I tell their father, who beats them ". " And are they good ? " " Oh, no, they are just like their father ! "

Then there are the people who leave their children alone. These children usually belong to the passive type, they do nothing, and the mother thinks her boy good and obedient, and when he clings to her, she says how much he loves her ; he loves her so much that he will not go to sleep without her. But somehow she finds he is slow and retarded in speech and he is too weak to walk. " He is healthy, but he is so sensitive, he is afraid of everything ! He doesn't want to eat either ; he is a spiritual child because I have to tell him stories to make him eat, he must be a saint or a poet ! " Finally she thinks he is ill and the doctor is called to give medicine. These psychic illnesses make a fortune for the child's doctor.

All these problems can be understood and solved if we know of the cycles of activity necessary for the construction of the personality ; if we realize the children's need to hear men and see the actions of men and carry out their own experiences. We know that all these troubles are due to faulty treatment in the earlier period ; they have been startled mentally, their mind is empty because they had no means of constructing it. This starved mind (of which psychology takes much notice now) is the main cause of these defects and another cause is the lack of spontaneous activity guided by the constructive impulses of the child which we have studied. Hardly any children have been able to find the conditions necessary for full development. They

have been isolated from people, made to sleep all the time ; the adults have done everything for them ; they have not been able to complete cycles of activity without interruption. They have not been able to observe objects, because when they handled them, they were taken away ; seeing them only and unable to handle them, made them want to possess them, so when they did get hold of a flower or an insect they pulled them apart, not knowing what to do with them. And the passive child has developed inertia instead.

Fear also is traceable to the early period. If, when the little child fell down all the stairs, the adults had all rushed to help him and made a fuss (as they usually do) he would have felt fear instead of laughing. Our actions are often the cause of fear in children.

One of the facts that made our schools remarkable was the disappearance of these defects. It was due to one thing : the children could carry out their experiences on the environment, and these exercises were nourishment to the mind ; that is why all these common defects disappeared. Round the interest in their activity they repeated exercises and passed from one period of concentration to another. When the child has reached this stage and is able to concentrate and work round an interest, defects disappear ; the disorderly become orderly, the passive active and the disturber becomes a helper. This is a marvellous fact and the disappearance of these defects made us understand that they were

acquired, not real characteristics. Children were not different in that one told lies and another was disobedient. All the troubles came from the same cause : the children had lacked the necessary means for psychic life.

So what advice can one give to mothers ? To tell them to give their children work and interesting occupations ; not to help them unnecessarily, and not to interrupt them if they have started any intelligent action. Sweetness, severity, medicine do not help at all. Children are suffering from mental starvation. If anyone is suffering from physical starvation, we do not call him stupid or hit him or sentimentalize over him ; that would do no good ; what he needs is to eat. So it is with this question too ; neither harshness nor sweetness will solve the problem. Man is by nature an intellectual creature and he needs mental food almost more than physical food. Unlike animals, he must construct his own behaviour and life is life for this need. So if he is on the road where he can construct the behaviour for which life has been given to him, all will be well. Physical illness disappears, nightmares disappear, digestion is normal without gluttony. He becomes normal, because the psyche is normal.

This is not a question of moral education, but regards the development of character. Lack of character, faulty character disappear without the need of preaching or of an example by the adult. Neither threats nor promises are necessary, but just conditions of life.

CHAPTER XX

A SOCIAL CONTRIBUTION OF THE CHILD : NORMALIZATION

ALL the characteristics we described in the last chapter when tracing the behaviour of the strong and weak children, are not considered evil by general opinion ; some are considered good traits. Those children who showed a passive character and were attached to their mother are considered good. Other traits still are considered as signs of superiority ; children who are always bustling about, are extremely healthy and have vivid imaginations are all considered superior. They usually pass from one thing to another, but the parents think they are bright children.

So we might say the world considers three types of children :

1. Those whose traits need to be corrected ;
2. Those who are good (passive) and serve as models ;
3. Those who are considered superior.

The two latter types are considered desirable and the parents are proud of such children ; even when (as

with the last type) they feel a certain discomfort when they are near, they still speak proudly of them.

I have insisted on this point and drawn attention to this classification, as these features have been noticed during the centuries, and no other characteristics have been noticed but these. Yet what I have seen in my first school, and in others, is that all these characteristics disappeared at once, as soon as a child became interested in work that attracted his attention. So-called bad traits, the so-called good and the so-called superior, *all disappeared* and only one type of child appeared with none of the traits I have described. This means that the world hitherto has not been able to measure good or bad or superior ; what we considered so, was not really so. It reminds me of a mystical saying : " Nothing is right except you, O Lord ; all the rest is erroneous." The children of our schools revealed that the real aim of all children was constancy at work, and this had never been seen before. Neither had spontaneity in the choice of work, without the guide of a teacher, ever been seen before. The children, following some inner guide, occupied themselves in work (different for each) that gave them calm serenity and joy, and then something else appeared that had never yet appeared in a group of children : a spontaneous discipline. This struck people even more than the explosion into writing. This discipline in freedom seemed to solve a problem which had been insoluble. The solution was : to obtain discipline,

give freedom. These children going about seeking for work in freedom, each concentrated in a different type of work, yet as a whole group presented the appearance of perfect discipline. We shall return to this question of the real nature of the children that finally obtained, but meanwhile we will describe the change which took place in the children.

All children, if placed in an environment allowing ordered activity, show this new appearance, so there is one psychic type common to all humanity, which hitherto had remained hidden under the cloak of other apparent characteristics. This change that came over our children and made them appear as of one uniform type, did not come gradually, but suddenly. It always came when the child was concentrated in one activity ; so that if there was a lazy child, we did not urge him to work. We merely facilitated contact with the means of development in the prepared environment. As soon as he found work all his trouble disappeared at once. It is not reasoning with the children that will do good ; it is something within themselves that sets to work.

The human individual (especially in the period of construction) is a unity and constructs a unity, when the hand is working and the mind is guiding it. I recognized that when the mind and hand are not united, there is no unity in the individuality and it is then that these superficial traits of 'badness', 'goodness' and 'superiority' appear. This conclusion is the result of my observations

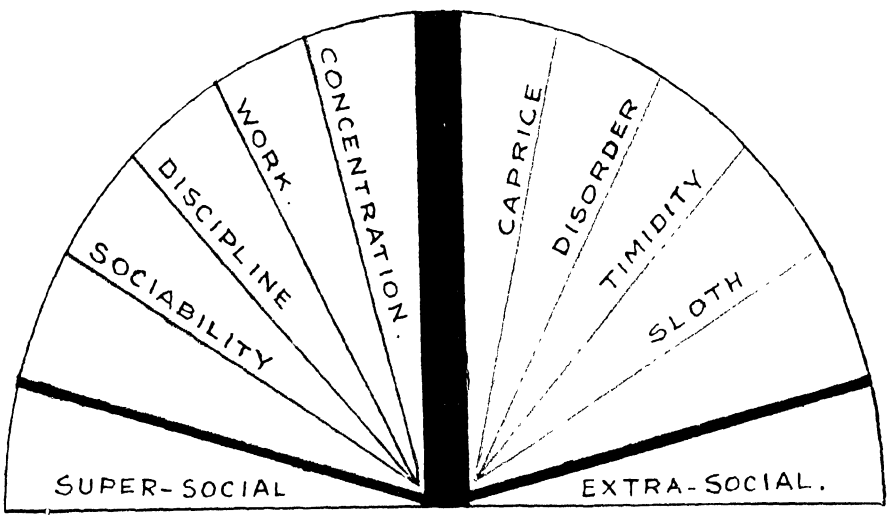


FIG. 13

Normal and deviated features of the child's character

of children, it certainly is no *a priori* idea of mine. This is the new point which came to light and which is perhaps most difficult to understand, probably because we live in a world of virtues and defects (which are rewarded or punished) and among children who have always shown the traits outlined above, because they had no opportunity to express anything else. It is not necessary to have an adult as a guide and mentor to conduct, but it is essential to give the child opportunities of work which have been denied to him heretofore.

The passage from the superficial to the normal traits is always through a function, through intelligent activity of hand and mind together. In figure 13 on one side we see all the different characteristics of children as we usually know them, represented by lines raying out. They are innumerable. The middle thick perpendicular line symbolizes concentration on one point ; it is the line of normality. When the children are able to concentrate, then all the lines on the right of this middle line disappear and only one type is seen revealing characteristics represented by the lines on the left. The loss of all the superficial characteristics is not achieved by an adult, but by the child passing along the main line of functioning with his whole personality ; then normality is achieved.

I shall now give some examples of what appeared in some schools after the first school which had such unusual conditions. People came from all parts of the world to take my Courses and then went back to their

own countries and started schools there. Most of these schools were for rich children, who have more defects, because they have much less chance of normal functioning, having so many servants. The first letters I received from these students were letters of dismay; records of tremendous disorder, and they described in detail all the usual defects, *e.g.*

1. One child used material as if it were a train or an aeroplane, etc. he joked and talked loudly and molested other children (the old superior type).
2. Another child was snobbish and superior towards the apparatus and was lazy.
3. A little one was attached to his brother, took exactly what his brother took, and when his brother got up, he got up too, etc.
4. Other children were almost pathological cases, *e.g.* afraid to touch water, etc., and one about $3\frac{1}{2}$ did not speak at all.

A collection of children like these, all together, made a confusion for the teacher too. One said that they threw the material on the ground and danced on it. The teachers who expected little angels to drop down from heaven were therefore bitterly disappointed.

After some months the tone of the letters began to change. The transformation which we call 'normalization' had occurred. Teachers who had no connection with each other (some were in New Zealand, others in Rome, in France, in America, or in England) all wrote

the same thing : " such and such a child has found some work and he has changed himself." The child who followed his brother everywhere, one day took the pink tower by himself and his attention became fixed on it. When his elder brother went into another room, the little one did not follow him, so that the big brother had such a shock that he said in an almost offended tone : " What is this ? You are doing the pink tower when I am drawing in the other room ? " The little one had found his own value and no longer needed the moral support of his brother. Another child would not come to school or stay in school without his mother ; she would put herself in a corner and say she would stay and if she tried to slip away, the child would immediately cry. One day the child became interested in washing a table ; the mother thought this was a good opportunity to slip away, but she hesitated to do so without some intimation to the child lest he should scream later when he found her not there. She, therefore, said to him, " I am going ". The little one said, " All right, goodbye Mummie ", and never needed her any more either to stay in school or to accompany him to school. The children who had been attached to their mother and brother, had not had freedom for independence, so they were unable to do anything alone. Someone always had to function for them. As soon as both became interested in work and the mind guided the hand, they found their own independence and functioned for themselves.

The romping child who used the material as trains and aeroplanes became interested in the geometrical insets; he went round the shapes and the frames and fitted them in with his eyes shut. At once his wild fancies disappeared. Instead of saying: "This is an engine", "This is an aeroplane," etc., he said: "This is a trapezium", "This is an octagon," etc. He was attached to reality now, not to fantasy; and his hands which had previously dropped everything, now became very definite, precise and careful in their work. He became calm and serious with all the material. If one examines these things, one might say that this little fellow, living in a world of fantasy, had had nothing of real value to occupy his attention, so he occupied himself with what he found around him; neither had his hands had any opportunity to hold anything for any real purpose. When the mind, which had been running about in fantasy apart from the hands which had nothing to do, became a guide for the hands which were doing something real, there suddenly came a united individuality and the real work in its turn was now nourishing the mind.

The child who had a fear of water, especially of pouring water (and had probably been scolded with some violence for playing with water) became interested in the baric sense tablets at last. She was very happy; and when she had finished that, she did some other work. Then she suddenly realized that she was no longer afraid of pouring water; and she was so happy that seeing

some children using water colours, she immediately went to fill all their little jars with fresh water and took that task as a special one for herself.

One child had a trait of not sitting down, even though tired. We tried to find out what had happened earlier in her life to account for this peculiarity. The mother said she had never scolded her for sitting down at any time, and then the father remembered an incident which happened when the child was about one and a half years of age. She had a new dress and she went to sit on a newly painted stool, and the mother said suddenly : " Be careful ! don't sit on that ! there now you have made a mess ! " This was the cause of the fear of sitting, and the question was how to cure her. I said : " Take no notice of her ; let her find her own interest ". After a time she became interested in some work and repeated the activity full of interest. Wanting to continue she " unconsciously " drew a chair to herself and sat down. From that moment she lost her fear of sitting down. The child of $3\frac{1}{2}$ years who did not talk, was examined by a doctor ; there was nothing organically wrong which would prevent her from talking. She was given electric treatment, but that did not help. She spent some time in school wandering about, doing nothing and saying nothing of course. At last she became interested in some work and we could see her face light up. When she had finished, she ran to the teacher and said : " Come and see what I have done ! ", her first words.

Also digestive trouble, nightmares and other things disappeared and at home too the children became calmer. One child always afraid of the dark, became interested in work at school, and one evening at home, when her mother needed something from a dark outhouse, she said: "I'll go and fetch it Mummie". She was no longer afraid of the dark.

So too the over-obedient, passive children changed, the passivity and the over-obedience disappeared through concentrated spontaneous activity.

We must repeat that this was not a sporadic phenomenon. It happened in our schools all over the world, so we realized that this type of calm, serene, unafraid child was the real, normal child and showed the real behaviour and character of childhood. It was only afterwards that I fully understood what this actually meant, *viz.*, that the child must construct himself, as we have been expounding in this and our other books. If the conditions do not allow this, normality disappears, but once the conditions for building the psyche are there, the normal type appears. We therefore called the type that developed in our schools 'normalized' children and the others deviated children. One of the greatest and most interesting factors was the extraordinary discipline of normalized children, each occupied in the work of his choice. The newspapers said: "It is marvellous if it is true, but it is incredible". Everyone who visited these schools tried to find out what trick

I used, they were sure it must be a trick. Some said it was my personal hypnotism that produced the result, but I said : " This happened in New York ; and I was in Rome ". Others thought that the children had been prepared before by the teacher or that she used her eyes in some way to express approval or disapproval, but who would have gone through all this trouble to prove something that had not been seen before ?

A public occasion which also demonstrated the genuineness of these phenomena was at the World Fair in San Francisco, at the time of the opening of the Panama Canal. Among the educational exhibits had been built a small Montessori classroom with glass walls so that the public could watch from outside without disturbing the children at work. Helen Parkhurst, the later orginator of the 'Dalton Plan', was then the teacher. The door was locked at night and the key left with a caretaker. One day the caretaker had an accident and did not turn up, so the people were outside waiting and also the children with their teacher. The teacher said : " We can't get in today to work ", but one child saw an open window and said : " Lift us up and we can get through the window and work ". The window was of a size proportionate to the children, so the teacher said : " That is all right for you, but I cannot get in ". The children answered, " Never mind ; you don't work anyhow ; you can sit outside and watch us with the other people ". It is not a theoretical principle that

I am advocating, they are facts which were witnessed by the whole world.

At one time there was an earthquake in Italy which destroyed the city of Messina ; after the earthquake many children were found who had lost their parents, and were suffering from terrible shock and obviously had to be helped by the State. They were collected together in an orphanage and sixty of them, who were the most depressed and of a suitable age, were chosen to try and give them some special consolation by using this new method. They were of course most difficult to treat and so a special environment was made for them to help their independence. It was very beautiful and bright with many exercises of practical life. In a few months they were so happy that they skipped about as they laid tables in the garden for lunch. People outside wondered what had happened. What had really happened was this : into the exercises of practical life many complications had been incorporated which were given with great exactness of detail. Among the people helping them were aristocrats who taught them many refined details of social manners that were not known outside aristocratic circles, and these details and the precision they demanded caught the children's interest and they began to have a new life. People outside said that these children were both perfect gentlemen and ladies, and perfect servants. It is the number and exactness of details that call forth the attention ; on a gross action the mind does not dwell,

on exactness of detail the mind *must* dwell. One American authoress, Dorothy Canfield-Fisher, came to see these children and as a result she wrote *The Montessori Mother*, a book which is still in print. In the case of these children it was a depression of life that was cured ; life had gone to its lowest extremity through the shock the children had received, and now it came bubbling up again.

From all this we must conclude that the first psychic need of the child is to live according to his own psychic laws. Activity brings him to the normal behaviour of man, because it is not merely ordinary activity as with an adult, it is a need of life. The child must develop, functioning individually, going towards independence, the mind linked with the hand. If the natural laws are not obeyed, innumerable difficulties arise ; if natural laws are obeyed the difficulties disappear. If therefore working with the hands according to free choice in a prepared environment expands the activities of the first period and perfects them, it is possible between the ages of three and six years to overcome all difficulties. The facts are simple, but they are the facts of life, witnessed all over the world in the last forty years. On the basis of these facts new characteristics have been revealed, and a new organization of schools has commenced ; schools where the children are active and the teacher is mostly passive, acting indirectly through the environment.

This transformation of character does not take place in all children. Certain organic forms of defects and

illnesses which originated in the pre-natal state, we cannot help or cure. The small angle represented at the left of our diagram represents these. They are the congenital, mental and moral defectives who will grow up to be the idiots and criminals of our society. They are relatively a very small proportion of humanity, but this proportion of the criminals, the idiots and the mad is increased by the numbers of those who could have been helped before they were six years old, but were not helped. So we begin to understand a little of the problems of society. In the United States of America, for instance, statistics give us the figure of 100,000 as the number of new admissions to the mental asylums every year ; and since every one of these has been crazy for ten years at least, one can realize how many crazy and mad people there must be in the United States, and how many are still at large. This is not natural, most of these could have been helped, but only before the age of six years. Jails also are full and special jails are built for youths, another tragedy.

The small angle to the right of the diagram also represents those whom we do not help ; they are the saints and geniuses of society who do not need us. Normalization is for the great mass of men, not for the very few exceptions on either side, those who do not need it because they are great personalities as saints and geniuses, and those who cannot be helped because their defects are pre-natal in origin, the criminals and the mad.

We have hopes that through understanding many can be helped and that the number of the insane and criminal can be much reduced, but the schools and social life must alter for they are responsible for much of the trouble. Hence, this first institution of mine is important, and we owe a great debt of gratitude to these first children for, without their example, we could not have known all this.

The child is the great citizen who has shown the way of bettering society, the simplicity and uniqueness of the way are all the contributions of the child. It is only through work that re-organization can be achieved, but work that gives joy, not work imposed against the laws of life.

CHAPTER XXI

CHARACTER-BUILDING A CONQUEST, NOT A DEFENCE

IN the previous chapter we mentioned that the defects that arose *after birth* were lost by children if they had the proper environment before the age of 6 years. The disappearance of these defects was not due to the general practice of attacking them one by one ; they all disappeared suddenly in the same fashion when the children's interest was centred on one activity. Then began a series of phenomena which was constant. All normalized children acted in a uniform manner, *i.e.* they continued to *work concentrated on something, serene and tranquil.* This, at the time, was surprising, because it had never before been seen in small children. They also showed a special characteristic not seen in adults and not before seen in children : they *worked with the maximum effort,* and *continued their activity till the task was completely finished and with exactitude.* This accomplishment of a task with exactitude is uncommon even in adults ; the children do this to the extreme limit, for, having perfectly completed their work

once, they repeat it many times often carrying these repetitions to what seems to us absurdity. They will polish a brass vessel ten times over or repeat forty times and even two hundred times the exercise with the cylinders. Obviously children do not work with an outer aim ; it is evident that they have another aim which is not external, but dictated by nature. These repeated and concentrated activities always share one feature ; the mind and the hand are engaged in it together. We must envisage this and try to understand it. These children are building the character of man, they are elaborating the inner qualities which we admire in a man of character : the ability to decide rapidly, constancy in work. These qualities have not been developed in response to preaching or to our examples. We must study character from a positive point of view : character is only acquired through long and gradual exercise which lasts for years. This is achieved in the period from 3 to 6 years and this creation and elaboration of qualities of character are carried out along the lines that nature established for the formation of the human personality. As between 0 and 3 years of age certain acquisitions are elaborated (*e.g.* language) so here the creation and elaboration of character is achieved following natural guides. All the acquisitions from 0 to 3 years were made through the absorbent mind so that the child, merely by living among others, absorbed the language, etc., but from three to six years, he must *construct* and he constructs his character in an

active fashion. The construction of character is accompanied by work so that at six years of age the construction of mental qualities and character has been fundamentally accomplished. If we take this into consideration it becomes clear, not only that we cannot *teach* the virtues of character, but that we must not disturb the normalized child of three to six years when he is building his character. If we intervene unnecessarily we interrupt this construction. The work of education for children of this age is therefore not to preach to them ; there is only one way of helping this spontaneous development of character and that is to prepare the environment for their development and then to respect their intelligent activities and leave them alone. It is useless to put examples in front of these children. For one thing, they may do better than the example already ; and in any case it is useless to preach to them, it is like talking to the wind. Even ordinary parents understand something of this, that is why they smack them because they know that it is useless to talk to them.

The revelations of our children pointed the way to us to place this part of education on a scientific basis. At a later age it is possible to approach the mind of the child directly and we can intervene with preaching and exhortations. After six years only one can become a missionary of morality to the child ; between the ages of six and twelve years the conscience is awakened and the child sees the problems of what is right and what is

wrong. Still more success is attainable between twelve and eighteen years when the child begins to feel ideals like patriotism and the social aspect of religion, etc. Then we can become missionaries to them and also to adults. The moralizing activity of preaching is always carried out among adults, so there is plenty of time for our missionary efforts. The only trouble then is that after six years of age they cannot spontaneously develop qualities of character, and the missionaries, imperfect themselves, have difficulties, because they are trying to act on smoke not on fire. Educationists lament that they can teach science, literature, etc., but that these young people have no character, and when character is lacking, the propelling force of life is lacking. It is only in those who, through storms and mistakes of the environment, have nevertheless been able to rescue some or all of these characteristics, that there is character. The fault lies in the fact that we did not give them the opportunity of constructing their *own* character through the normal activities natural to them and undisturbed by us, before they were six years old. Now we cannot make these young people concentrated if they lack the power of concentration. If we tell them to be constant in their work and attend to it exactly, how can they do it if they lack the power? It is as though someone said "Walk straight" and we had no legs to do it. *These abilities can only be acquired by exercise and not by command.* I cannot play on the piano or the veena even if commanded

and willing to do so, because I do not have the ability ; the chance has been lost. Many things lost to the child during the creative period cannot be created again. What can we do then ? Society generally says : " Be patient with youth ; we can only persist in our good intentions and examples " ; and we think with patience and time we shall achieve something. We achieve nothing ; with the passage of time we become older, but we create nothing. Nothing can be achieved *only* with time and patience ; if you do not use the opportunities of the creative period when they are there, you can wait for eternity with the patience of Job.

Another point becomes clear if we look at humanity, which is really an undeveloped mass of confused minds. Everybody repeats : " All are different from each other ", but these different individuals can be grouped in different categories. If we could become mental eagles and look at them from above we should see these categories. It seems that, as with children, these adults differ in defects, but have something deep and profound, common to all of them, but remaining hidden. In all men there is a tendency, though sometimes vague and subconscious, to better themselves, a trend towards spirituality. Indeed these actions on the defects of character, have later on the quality of stimulating improvement. Both individuals and society have this in common : continued progress. This is a fact both externally and internally speaking and means that there

is a little lamp in the subconscious of humanity which leads it to betterment. In other words the behaviour of man is not fixed as in other animals, but can progress, so it is natural that man has this urge to progress.

In figure 14 we see in the centre a red circle, the centre of perfection, around it is an aura of blue which represents the category of humanity of the stronger normal type. The white space round that represents the great mass of people not-well-developed in various degrees. On the periphery is a small brown circle between two black lines which represents those outside the circle of normal humanity, the very few extra-social or anti-social people (the extra-social being the imbecile and insane and the anti-social, the criminals). The criminals and the insane have not been able to adapt themselves to society ; all the others have been able to adapt themselves to a greater or smaller degree. The problems of education, therefore, are all with people who have been able to adapt themselves to some extent.

That adaptation to the environment is the work of the child under six years, so here is the origin of human character. What a tremendous problem it is, finding or not finding easy adaptation ! There are the people who have more or less perfectly adapted themselves, they more or less answer the needs of society, they are those represented in the white circle. Those in the blue circle are nearer to perfection, stronger because they have a greater amount of vital energy or found a better environment,

while the others have less vital force or met with many obstacles. In society, those in the blue circle are recognized as having the stronger character and the others are said to have a weaker character. People in the blue circle have a natural attraction to the perfection represented by the centre, whereas the people in the white circle feel an attraction to the extremity, the outer circumference. So there is a category of people who feel an attraction to, and are sliding down towards, the anti- and extra-social belt, as if they were climbing with difficulty and slipped down. They meet many temptations and if they do not continually make an effort, they slide down ; they feel themselves becoming inferior. We have to sustain these morally so that they do not slip in temptation. It is not an attraction of pleasure, because no one enjoys slipping towards criminality or insanity ; it is like an irresistible attraction of gravity and involves continuous fighting against it. It is this effort to resist the tendency to slip downwards that is considered a virtue. Virtue, in fact, prevents us from falling down into a moral chasm. Such people are told to take care not to fall and they will do penance ; they will put a rule on their life to keep them from falling ; they will attach themselves to someone better than they are ; they will pray to the Omnipotent to help them against temptation. More and more they clothe themselves in virtues, but it is a very difficult life. Penance is not a joy of life ; it is an effort of one climbing a cliff and clinging to some

projection so as not to be dashed on the rocks. Youth feels this pull of gravity and it is the educationists who try to help them by examples and exhortation. They serve as a model, though they feel the pull sometimes as much as the youths do. How many times they say: "I must be a model, or what will my pupils do?" And they feel the restraint of model-hood. Both pupil and educationists are in the category of the virtuous people—the white circle; this is the environment of the education of character and morals today and so it has been accepted as the only education. Hence the majority of people are always in the white circle and humanity generally considers that this is the true man, who is continually on the defence.

In the blue circle are the stronger people with an attraction to perfection. There is no pull of gravity, but a *real* attraction to get nearer to perfection. This may often be an aspiration without the possibility of actual perfection, but in any case they go towards it naturally and almost without effort. They are not people that are not thieves because of fear of the police or that make an effort against the sense of possession; they are not people led towards violence, but refraining from it by virtue; they are not attracted by the possessions of those around them nor are they violent. They feel only one attraction, that of the centre of perfection and they feel that because it has become a quality of their life. They do not need virtue in the same way, because they are less subject to

the pull of gravity towards imperfection. They hate imperfection. When they go towards the centre of perfection they do not feel it as a sacrifice, but as their dearest wish ; they want to go.

Let us make a physical comparison, and consider the question of vegetarians and non-vegetarians. Many who eat meat, abstain from eating meat on certain days of the week, and in Lent they fast for forty days, which means they go without meat and some other things. It often is one long, dreary period of penance to them and they feel very virtuous. After this period there comes a reaction and they gorge on all sorts of meat perhaps. During Lent they are tempted and say : " O, Lord, help me ! " These are virtuous people who observe the rules of other people and religious leaders. They are pure, but in the blue field are the celestial ones, the vegetarians, who have no temptation to eat meat ; they avoid it. It is of no use sending a missionary against meat-eating to the vegetarians ; they observe non-meat-eating better than he does.

Let us take another example : the physically strong and the weak (*e.g.* a sufferer from chronic bronchitis). The latter needs protection for his lungs with many warm wraps and woollen garments ; perhaps too he needs baths and massage for bad circulation. These seem quite normal people, they are not in hospital, but take care of themselves. Or perhaps their digestion is not good and they have to eat special food in special ways at

special times in order to keep well. All these people keep afloat among the normal people, but with a lot of care and attention to details, and with the fear of the hospital and death always in the environment. They are always attached to doctors and nurses and people of the family and they have a constant cry of "Help me". But look at those who enjoy good health, they eat what they like and do not care about rules. They go out in the cold because they enjoy it, and they jump into an icy stream for a swim when others hardly dare to put their nose out of doors. Polar explorers feel the adventure as a joy; they don't worry about the physical discomforts. In the whitish field of virtues, too, Sadhus and Babus are needed and spiritual mentors of all kinds or there is a fall into the abyss or chasm of temptation. But the people in the blue field do not need these in the same way and they have joys the others could not dream about.

Let us then go to the circle of perfection in our effort to put character on a basis of facts. What is perfection? Is it perhaps to possess all the virtues to the highest degree, and to attain what? Here also we must put something possible and factual. By character we mean the behaviour of humanity, which is urged (even if subconsciously in many) towards progress. This is the general trend: humanity and society must progress in evolution. Some people feel the attraction towards God, but let us consider for the present a merely human centre of

perfection, which is the progress of humanity. Some individual makes a discovery and society progresses on that line. It is the same in the spiritual field, an individual reaches a level and gives a push forward to society. All that we know, spiritually speaking, and all that we see, physically speaking, has been the result of some man's attainment. If we study geography or history we see continuous progress, because from time to time some man puts a point in the red circle of perfection and this is an attraction, but only to the people in the blue field, who are sure of themselves and who do not need rules or penance. They do not have to spend energy fighting temptation, thus they can use the same energy to achieve things impossible to those who have to struggle in order to keep safe from temptation. So Admiral Byrd submitted himself to the humiliation of one who seeks to collect money in order to do what ? to explore the South Pole and expose himself to all the sufferings of a polar expedition. He felt nothing of the suffering, he felt the attraction of the red circle of perfection, of reaching something not yet reached.

To conclude we might say that humanity is too wealthy in those who are in the white circle and too poor in those who are in the blue circle from the point of view of character. There are too many people in need of crutches to enable them to avoid temptation ; and if the world continues to centre education on this level, it is keeping the people down on this level.

Imagine a missionary from the white field coming to children in the blue field and telling them to renounce meat or they will fall; such children would say: "I cannot fall, I feel no attraction for meat". Or another missionary says: "You must cover yourself or you will catch a cold", the child would say: "I do not need to cover myself, I have no fear of cold". Let us realize that this tendency in education to provide mentors from the whitish field, tends to push all the children down to this level (even if it is only to resist) and not up and towards the centre of perfection. If we look at all the syllabuses of education, we see the scarcity of information they give and the aridity of them. It is humiliating this education of today and brings about an inferiority-complex and an artificial reduction of human strength. It does this by its very organization. It puts limits to knowledge, and limits below the level of man. It gives men crutches, when they could have strong legs to run with. It is a wrong education based on the inferior qualities of man not on the superior qualities. It is by the effort of man himself, that men are today a mass of inferior beings. They have not built their character before six years of age. We must try and reconstruct the real level, try to allow the child to use his creative powers; and probably the blue space which is not one of perfection, but of attraction towards perfection, not of defence, but of conquest, will invade the whole of the whitish space. If there is only one epoch in man's life when he can construct

himself psychically, and the construction is not then made or is badly made on account of a wrong environment, then we naturally obtain a mass of undeveloped individuals. Supposing, however, that we allow the character to develop according to nature and give an opportunity for constructive activity, not exhortations only, then the world will need another type of education.

Take away artificial limitations and set in front of humanity great things to be accomplished. I can read all the histories and philosophies and remain a dunce, but give the *means* which lead to great efforts and the result will be different. We must cling to something which finds a response in man in order to do this. The qualities which we can encourage are the creative qualities which are built up in the creative period, and if we do not allow them to establish themselves then they are not there later, and it is useless to preach and give examples.

This is the difference between the old and the new education : we wish to help the construction of man by himself at the right period ; to help all possibilities to ascend to something great in order that something may really be done now. Society has built walls and barriers, we must destroy them and show the horizon. The new education is a revolution, but non-violent, *the* non-violent revolution. After that, and if it succeeds, it will be impossible to have a violent revolution.

CHAPTER XXII

THE SUBLIMATION OF POSSESSIVENESS

HAVING given a glimpse of the general phenomena, let us observe in detail the facts which took place and the interpretation we gave to them. These facts that presented themselves, both because of the age of the children and of the intensity the children showed, were very surprising and arresting, but even more so because of the relation between the character shown by the children and the loftier characteristics of humanity.

If one studies all the phenomena which took place, one can see in them all a process of construction. This process of construction may be compared to the action of caterpillars at a certain stage. Instead of moving about on many twigs as they had been doing, they stay in one spot and become very active there, and after a little time one sees a cloud of threads hardly visible, so diaphanous they are, but this is the beginning of a strong cocoon. As with the caterpillar, the first phenomenon we notice is a phenomenon of concentration on one thing. In a child of three and a half, who was in our first school, this concentration was striking for its

intensity ; there were many other stimuli in the environment, but it was impossible to break her concentration. A similar degree of concentration can be observed in some adults, but only in exceptional characters as for instance in Archimedes, who was so intensely concentrated in his geometrical problems, that although enemy soldiers had entered the city and were penetrating his house, he said merely : " Don't disturb my circles ! " He had not realized that the city had fallen to the enemy. Poets also have been known to continue their work without noticing a noisy carnival procession outside. But it is only with geniuses that such concentration is noticed in adults. The phenomenon in the three and a half year old child was not of the same type of concentration. In the child such concentration is given by nature, and when we see it repeated by different children in different countries, we decide that it must be a part of the pattern of construction. As with the compass the fixing of one point is necessary before anything can be done, but once it is fixed any design can be drawn, so with the construction in the child the fixing of the attention is the first stage. It need not always be fixed on the same thing, but unless it is fixed, construction cannot begin. It is as if the individuality found a centre and once that has been done, it can possess what it achieves. So with us, if we want to organize, we must have a concentration diffused over everything connected with the work in hand. Without this concentration the object with which

the child is concerned possesses the child, he is led by all the stimuli, but once this fixity of concentration obtains, then the child possesses and controls the environment.

When in the adult world, we find a person changing his interest frequently, we speak of him as inconsistent in character and we know that such people are unable to undertake anything responsible in life, whereas when we see a person with a deep aim, who can distribute his attention and organization on things given to him, we feel that such a person will do something in the world. We tend to ponder on these things and say we should like to have our young students concentrated on their work, but we cannot manage to bring it about. This means then that it is not among the items that one can give by ordinary educational means. As it is difficult to get from older children (college and high school students) who would have thought of getting it from three and a half year old children ? It would be impossible to think that any teacher could provoke such concentration when the rest of the class were dancing and jumping about ; all the more impossible to obtain it in a whole class, yet, it happened in that class of the Messina orphans whom I mentioned in a previous chapter. There were sixty of them working in one large room or hall, and a hundred students came in and ranged themselves round the walls, and the children did not notice their entrance or look up.

This phenomenon shows that nature is constructing some great item of the human psyche, and from this already one can understand that the elements of the human will are being built. It is not by an already existent strength of will that the children achieve this concentration, it is by nature ; nature builds the will in this way. After this all the gyrations and deviations disappear and character is formed. What takes place after this fact ? We see constancy (repetition of exercise) with no outer aim and therefore with an inner aim ; and this constancy is characteristic of children, we adults do not possess it. We may have constancy in pursuing a long work, but not in repeating the same work. This repetition of the children is a sort of training for character which the adult will be able to use, but which the child constructs. There are certain adult people who do not have the patience to see the child repeating all these exercises of exactness ; it is done so often. The child does not yet have the will for this constancy, he does it by nature, but through it he builds the will of the adult which will later persist in carrying out any task that must be carried out. And if we see how nature practises each single exercise separately and so often, we see how impossible it is to obtain any constancy or will from youth who have not had these possibilities of practice and of developing the elements of the will. People who do not have these are not to be blamed, they had no opportunity to construct them.

There is another thing that takes place after this first fixation of concentration and that is the determination by the child of the action he will carry out. Children in our classes, who are choosing their work freely, are exercising this determination of action. This also is constructed by repetition, every day, for years. We often find ourselves with adults who can never decide what they want, we say they have no will. Quite a majority of people are like this and when we find a person who can express clearly what he wants and what we want, we say he has a strong will and can determine his actions. Children determine their action by nature's law, the adult by mental reflection. It is evident that in order to exercise this power of determination of actions, it is necessary to have independence from an adult who tells the child what to do every moment of his life, because it is evident that this determination comes from inner development and inner forces. If someone, stronger for the time being, usurps the office of the inner guide, then the child cannot develop either determination or concentration. So if we wish these qualities to develop, then the first thing is that the child must become independent of the adult. If we look at child life anywhere, we find that the strongest instinct is to be free from the adult and this is true for all species. And how logical it is when one looks at the conclusion ! But the child does not do it by logic, he does it by nature ; so nature gives a special design that the child must follow. This

indicates a parallel in the development of the character in man and the behaviour of animals, because the animal has to follow a certain pattern and does so by freeing itself from the adult of its species. There are natural laws that guide growth and construction and the individual *must* follow these laws if he has to construct his character—his psyche.

We can witness the construction of the psyche in every item and element. The character of man is not the result of education, it is a cosmic fact ; it is willed by nature. It is not the result of our imposition, it is a fact of creation not of education.

Let us consider some of the defects that disappear. One of the most common defects of children who have not been able to develop properly is an urge for possession. It is expressed by the saying "wishing for the moon". What is this if not an instinctive impulse ? Now in normalized children the active possibility of interesting themselves in any object, leads them to the stage where it is no longer the object, but the *knowledge* of it which fixes the attention, and then a change takes place in this possessiveness. It is a curious fact that children who want objects for physical possession, after a little time lose or break those objects. The defect of possession is accompanied by the defect of destructiveness, but if it is an object that has no lasting interest for us, this is understandable. It has only caught the interest for a moment and then is thrown on one side. Take a watch

for instance ; it is meant to tell the time and that is its real value. A tiny child cannot tell the time so the real interest in the watch is not there and quickly he breaks it. An older child may want to know how it is built and opens up the case and sees all the wheels which in their working give the time. This complicated machinery then interests the child *for its function* not for any outer aim. It has happened that people have felt this feeling for its function so strongly that it gives a passionate interest. History gives us examples. Louis XVI of France had this passion for the functioning of watches and he spent much of his time in a laboratory of watches. The Emperor Charles V, who ruled a large part of Europe, also had this interest ; he had twelve watches, which he tried to keep constantly at the exact time, but he couldn't succeed in keeping them together, so he said : "If I can't keep twelve watches together, how can I hope to keep all Europe together ? I had better retire ", and he became a monk. This is a second type of possession—interest in how it works. We can notice this in other fields. Children pluck flowers merely to possess and the result is that they destroy them. Always material possession and destruction go hand in hand. Do we not see it in the world at the present time ? If instead the child knows the parts of the flower, the kinds of leaves, the direction the stem takes, etc., then there is no possessiveness and destruction. He is interested, an intellectual interest centred on the plant or an intellectual possession.

The child will destroy also butterflies, if he merely seeks to possess the insect, but if his interest is aroused in its life and function, it is still centred on the butterfly, but to observe not to possess and destroy. And this intellectual possession showed itself in such a great attraction that we might call it a love, and it brought the child to care for these things in a delicate and refined manner.

So we can say that this possessiveness because of an intellectual interest is raised to a superior level and that intellectual interest urges the child to progress through this life they study. Instead of the instinct of possession, on this higher level we see three things : to know, to love and to serve. Possession transformed into love and when it has arisen, there is not only conservation of the object, but service of it. Then it is said that an instinctive impulse is sublimated. In the same way curiosity becomes sublimated into scientific research. Curiosity becomes an impulse to learn and from this the strength and attraction for study comes. It is interesting to observe that when the child has become the lover and admirer of *one* object, he becomes zealous in the upkeep of *all* the objects. It was the transformation of children in our first class which showed how children go from possession to a higher level of love and service. Their copy books when completely filled showed no 'dog's ears', nor smudges nor blots, but were neat and even decorated.

If we look at humanity, at the greatness of humanity, as revealed by history and evolution, we see that it is an

instinct of man to attain this sublimation. He tries to enter every field and protect and better it, so he helps life by intellectual penetration into the laws of life. The farmer serves his plants and animals all his life ; the scientist loves his microscope and lenses and shows his love in the extreme care and delicacy of his handling them. Humanity starts by grabbing with its hands and by destroying, and ends by loving things intellectually and serving them. Once in a while we have reversals as in the recent war when loads of lead fell on cities and destroyed them, but these are incidents only. Generally the rule is to serve and to love. It is in man to be brought out because it is in nature. The children who tore plants out of the garden, now watch for the plant's growth, count its leaves, measure its sides. It is no longer *my* plant, but *the* plant. This sublimation and love is given by knowledge, by penetration of the mind. Destructiveness cannot be overcome by preaching ; the child still wants the thing for himself so that no other shall have it. If we try to correct him by smacking, or moralizing or exploiting his emotions sentimentally, he may alter for five minutes, but he comes back to the same starting point. Only work and concentration which give knowledge first and then love will achieve the transformation. It is a revelation of the spiritual man to know, to love and to serve. It comes only by one's own experience and development, not through preaching. As soon as the attention of the intellect on details is there,

love comes, the desire to know all details, so that we may not unwittingly hurt.

To know, to love and to serve is preached in all religions, but it is the child who is the constructor of our spirituality ; he has revealed that nature has a plan for our behaviour or character, a careful plan determined in age and functioning and needing freedom and intense activity following life's own laws. Repetition of the exercise is followed in intellectual as well as physical exercises ; and it is not physics or botany or cleaning one's shoes that is achieved merely, but the will and the elements of the spirit are built. The adult can make use of that will which the child builds up, so the child is the spiritual builder of us all. Discoveries we make, when adults, often fall on our own heads (as actually in the recent war) because we have forgotten the soul the child has built or, more often, prevented him from building it normally.

CHAPTER XXIII

SOCIAL DEVELOPMENT

THE first work the child has to do is to find the way and the means to concentration which lays the foundations of the character and prepares social behaviour. This immediately shows the importance of the environment, because no one will be able to give concentration or to organize the child from without. He has to organize himself. The importance of our schools is that there the child has a chance of finding the kind of work that will give him concentration. A closed environment (our school or class-room) favours concentration ; we know this because when people want to find concentration they build a temple or a shrine. Through an activity that promotes concentration in a closed environment character is formed and the creation of the individual achieved. In ordinary schools children are mostly admitted after the age of five years only when they have already finished the first and most important period of formation, or, if they have not had the opportunity to do so, at least the *age* for it is passed, whereas our school is a protective environment where the

first elements of character may be formed and acquire their particular importance. That is why the question of the prepared environment in education, when first proclaimed to the world, gave rise to such a great interest. Artists, architects and psychologists got together to prepare carefully the size and the height of the rooms and the artistic elements of the school. This interest arose, because for the first time we had the conception of a school which was not merely a shelter, but aimed at helping the concentration of little children. It was more than a protective environment, it was a psychic environment. In this environment it is not so much the form, size, etc., but the objects it contains that matter, because concentration can only take place if a child has an object. These objects are not casually chosen, they are special objects determined by our experience with the children themselves.

The first idea was to enrich the environment with many objects and the children were given freedom to choose what they desired among these objects. We found that the children chose only certain objects, others remained unused, so we eliminated them from the environment. The objects we now have decided on, were chosen by the children themselves, and we did not work on these experimental lines in one country only, we tried it out all over the world. There were certain objects that *all* children chose, those we put in as essential ; there were certain objects that children in all countries rarely used, (even though adults thought they would use

them), those we eliminated. Wherever there were our normalized children and freedom of choice this happened, and it reminded me of insects that go only and always to certain flowers which they need. Here with the children there is the need of certain stimuli. The children chose those objects which aided their construction of themselves. In the beginning there were many toys, but the children did not use them. There were many types of objects for teaching colour, the children chose only one type : the colour tablets which we now use. This happened in all countries alike. Also with the size of the objects and the intensity of colour the choice of the children was taken as the determining factor. This brought about the system of determination and limitation of objects in our method. This principle has a bearing on social life as well. If there are too many objects or more than one set of material for a group of about 30 to 40 children, there is confusion. The objects therefore are few though the children are many.

In a class of many children there will only be one copy of each object. If a child wants to use an object which is already being used, he cannot do it and when the children are normalized they will wait till the other has finished using that material. Thus certain social qualities develop which are of great importance, *e.g.*, the child knows that he must respect objects being used by another, not because someone has told him, he simply must, it is a fact he has found by social experience.

There are so many of them, there is only one object, the only thing to do is to wait. As this happens every hour of the day for years, this experience of respecting and waiting enters into the life of each individual as an experience which matures with the passing of time.

Thus a transformation and adaptation take place and what is this but building social life ? Basically society is not founded upon liking, but on a combination of activities which must harmonize together. By these children's experience another social virtue is developed : patience. This patience is a sort of abnegation of impulses. Thus the features of the character we call virtues come by themselves. One cannot teach this type of morality to children of three years, but experience can. As normalization was not achieved by the children in other environments, this was thrown into greater relief. In the outside world children were snatching at this age, but our children waited. People said : " How could you obtain this sort of discipline in such small children ? " It was a question of a prepared environment and freedom within it, and thus certain qualities came out which usually do not appear in children from three to six years, neither much between adults of 25 to 30 years !

The interference of the adult in this adjustment of social behaviour is almost always wrong. *E.g.*, two children may walk on the line, one mistakes the direction and it looks like an unavoidable head-on

collision. The adult would have the impulse to turn one of the children round, but the children solve their own problem and they solve it every time, not always in the same way, but always satisfactorily. There are many problems of a similar kind in other fields of activity. They arise continuously and the children find great pleasure in solving these problems. If the adults step in to adjust, the children get nervous, but if they are left alone they solve them peacefully. This is also an exercise of social experience and if these problems are solved peacefully, there is continuous experience of social situations which could not be given by the teacher. Generally if a teacher interferes, she has an idea quite different from that of the children and disturbs the social harmony of the class. If there is such a problem, we should, but for exceptional cases, leave the children alone and mind our own business, because in so doing we are able to see how the children solve these problems and observe a manifestation of the behaviour of childhood, of the real behaviour which the adult does not know at all. Through all these daily experiences a social construction takes place. Generally the teacher has no patience and interferes. In fact, this is so instinctive that in the first days of my work, as the teachers could not resist this impulse, I said : "Tie yourself to a post" and several people did it materially. Other teachers instead of doing that had a rosary, and every time they had an impulse to interfere and someone (or they themselves)

checked it, they moved a bead. They always found it wiser not to interfere and they could count how many times they refrained from doing so.

Ordinary educators do not understand our work for social life; they think that Montessori schools cater for subjects of the curriculum, but not for social life. They say: "If the children work by themselves where is social life?" But what is social life but to solve problems, behave and make plans to suit all? They think of social life as sitting together and listening to a teacher or someone else but this is not social life at all. In fact in ordinary life social experiences are limited to the 'interval' or to the occasional excursions, whilst our children live and work in a community all the time.

Differences of character are revealed and different experiences are possible when there is a great number of children in a class. They do *not* take place when the children are few. Indeed the greatest perfectionment of children takes place through these social experiences.

Let us now give some consideration to the constitution of this society of children. It was brought about by chance, but by a wise chance. Those children who found themselves together in a closed environment were of different ages (from 3 to 6 years). Usually this is not found in schools, unless the older children are mentally dull. Children are usually classified by age, only in a few schools we find this *vertical* grouping in one class. The children themselves, however, made us see the

difficulty of trying to give culture to children of the same age and capacity. A mother may have six children, but her household runs smoothly. If some of those children are twins, triplets or quadruplets, then difficulties begin, because it is fatiguing for the mother to deal with four children all needing the same thing. The mother with six children of different ages is better off too than the mother with only one child. One child is always difficult. The real difficulty is not that he is petted, but that he has no society and he suffers more than other children. Families often find difficulty with the first child, but not with later children ; they think it is due to their greater experience, but it is really because the child has society.

Society is interesting because of the different types that compose it. An Old Men's or Old Women's Home is the most deadly thing. It is a most unnatural and cruel thing to put people of the same age together. It is one of the most cruel things we do to children ; it breaks the thread of social life, there is no nourishment for social life. In most schools there is first the separation of the sexes and then that of the ages, separated into classes. This is a fundamental error leading to all sorts of mistakes ; it is an artificial isolation which cannot develop the social sense. We generally have co-education for small children. Really co-education is not so important, boys and girls could have different schools, but there should be children of different ages in the classes.

Our schools have shown that children of different ages help each other, the small one sees what the elder one does and asks about it, and the older one gives an explanation. This is really teaching, but the explanation and teaching of a child of five years is so near to the understanding of the child of three years that the little one understands easily, whereas we should not reach his intelligence. There is a sort of harmony and interchange of ideas between them which is not possible between an adult and a child so small. We can see this if we compare it with adult society. A university professor gives a talk to illiterates and the latter cannot understand anything, so it is not wise to ask them to help in the work with illiterates. They do not easily find the means, the level should not be so far distant. That is why adult education is so difficult. When the first Popular University in Rome was founded, all the big University professors wanted to help. One of them tried to teach hygiene to these poor ill-educated people. The subject was plague and he showed pictures of the bacilli. The audience asked: "What are bacilli?" He answered: "You see them on this slide." Then he was asked: "What is a slide?" and he answered: "It is a slip of glass which you put under a microscope". The next question was: "What is a microscope?" etc., etc. So the professor gave up the chair in the Popular University. In the problem of educating the masses one should not go to the great professors, but to people of goodwill

and basic knowledge who can transmit it in simple language.

We teachers are incapable of making a child of three years understand many things, but a child of five years can make him understand ; there is a natural mental osmosis between them. Also the child of 3 years can become interested in what the child of 5 years does because it is not so very different from the possibilities of the child of 3 years. All the older children become heroes and teachers and all the smaller ones are great admirers. The small ones go to the older ones for inspiration and then work by themselves. In ordinary schools where there are children of the same age it is true that those with more ability could teach the others, but the teacher does not usually allow it. They merely ask to give the correct answers when others cannot and so envy arises. With younger children there is no envy, they are not humiliated by being taught by an older one, because they know they are smaller and feel that when they are big they can do the same. There is love and admiration, real brotherhood. In the old schools the only way to reach a higher level is by competition, which means envy, hate, humiliation and all things depressive to life and anti-social. The intelligent child becomes vain and gathers power over others, whereas the child of five with the child of three feels himself a protector. It is difficult to imagine how much this atmosphere of protection and admiration increases and deepens in its action : the class

becomes a group cemented by affection. The children come to know each other's character and appreciate each other. In ordinary schools they merely know : "That fellow got the first prize, that other fellow got zero." Brotherhood cannot develop in these conditions and yet this is the age of construction for social and anti-social qualities, according to the environment ; it starts at this age.

People become worried whether the five years old will acquire sufficient knowledge if he is always teaching younger ones. In the first place, he is not always teaching, he has his freedom and it is respected. Apart from that, in teaching he fixes his own knowledge, because he has to analyse and re-handle it in order to to teach, so he sees it with greater clarity. The older child also is benefited by this exchange.

The class of children from three to six years of age is not rigidly separated from that of the seven to nine year old ones either, so the six year old gets his inspiration from the next class. All our walls are only half walls and there is always easy access from one class to another as all the children are free to move from class to class. If the three years old goes to the class of the seven to nine years old ones he does not stay long, because he sees he cannot get anything that is useful to *him*. There are limitations therefore, but no separation and all the groups are in communication. The groups have their own environment, but they are not isolated. There is the possibility of an intellectual walk. A three

years old can see a nine years old extracting the square root, he asks him what he is doing. If the answer gives him no inspiration he goes back to his own class where there are objects of inspiration, but the six year old would be interested and would find inspiration there. With this freedom one can see the limits of the intelligence of each age. That is how we found that the children of eight and nine years understood the extraction of the square root being done (at that time) by children of twelve and fourteen years. Thus he also understood that the child was interested in and capable of algebra at eight years. It is therefore not only the age which leads to progress, but also the freedom to move about.

It is intellectual height which is important. In society you find people of all ages, in all history we do not find any instance of a society divided into age groups. In the ordinary schools divided in age groups there is nothing which is social despite all its claims. This intercourse between children of different ages brings harmony and happiness, because the older children find they are *real* teachers even though they have not been to Teachers' Training Colleges and are not B.T.s. These children *do* teach, whereas, judging by examination results, apparently qualified teachers do not teach !

There is animation everywhere and there is no inferiority-complex. The smaller child is animated, because he *does* understand what the older one does, and the older one is animated, because he can teach what he

knows ; so there is an enhancement of forces, of psychic forces.

These and other facts show that all these phenomena which seemed so extraordinary were not really so extraordinary. They were merely the result of natural laws being obeyed.

All these energies are thrown away in ordinary education. If henceforth they are no longer wasted, there will be new psychic wealth for the new generations. It comes without much expenditure : few teachers and by tying those few to poles !

It is by studying the behaviour of these children and their re-actions to each other in this atmosphere of freedom that the real secret of society is revealed. They are fine and delicate facts that have to be examined with a spiritual microscope, but they are of the utmost interest since they reveal facts inherent in the very nature of man. These schools, therefore, are thought of as laboratories for psychological research, although it is not really research, but observation that is carried out. It is this observation which is important.

There are facts the importance of which is very great, *e.g.*, that the children solve their own problems. If we observe the children without intervening, we notice one great fact, *viz.*, that children do not help each other in the same way as we do. We see children carrying heavy objects and no other child goes to help them, or they put all the apparatus away after a complicated

exercise and nobody helps. They respect each other and only help when help is a real necessity. This enlightens us greatly, because they evidently have an intuition of, and show respect for, the essential need of the child not to be helped uselessly. There was once a child who had spread all the geometrical cards on the floor with all the geometrical insets. Suddenly there was music, a procession passing, all the children ran to look except the little fellow with all the material. He did not go, because he would not dream of leaving all the material about like that. It should be put away and normally nobody would help him, but there were tears in his eyes, because he too wanted to see the procession. The others realized the emergency and all came back and helped him. Adults do not possess this fine discrimination in determining when to help. They help each other frequently when it is not necessary. A gentleman will often (as a matter of good manners) adjust a chair at a table to help a young lady to sit down when she is quite capable of sitting down unaided, or take her arm in going downstairs although she is quite capable of walking without his support, but when someone loses his fortune then nobody helps. When help is needed, nobody helps, when help is not needed all help ! So here is a point where the adult cannot teach the children, because he himself does not know the right way as well as the children do. I think that probably the subconscious of the child still retains the memory of his

desire and need to make the maximum effort and that is why instinctively he does not help others where help would be a hindrance.

Another interesting feature is the way children deal with a disturber, perhaps a child newly admitted to the school and not accustomed to the behaviour there. He disturbs and is a real problem for the teacher and the children. The teacher generally says: "That is very naughty. This is not nice", sometimes: "You are a bad boy", but the reaction of the children is interesting. One child approached such a newcomer and said: "You are naughty, but don't worry about it, when we came we were as naughty as you". The naughtiness was recognized as a misfortune and the child was trying to console the naughty one and bring out the real boy. He had compassion for him. What a change there would be in society if the evil doer evoked compassion and we made an effort to console him. It would mean compassion for him as we have when he has a physical illness. Wrong doing is often a psychic illness due to an unfavourable environment or the condition of birth or some such misfortune. It ought to evoke compassion and help, not merely punishment. This would change our social structure for the better. With our children if an accident happens, e.g., a vase that falls down, the child who has dropped it is often desperate, because they do not like destruction and also it suggests inferiority, they are incapable of carrying it

The instinctive reaction of the adult is to say : " See it is broken ; why do you touch these things when I have told you not to do so ? " Or at least they would tell him to pick up the pieces, because they think the child will take the lesson more seriously if he has to clear up the results of the accident. But what do the children do ? They all run around to help ; with the the sound of help in their little voices, they say : " Never mind ! We can get another glass." And some of them will pick up the pieces and another will wipe up the water that has run over the floor. So there is an instinct that attracts them to help one who is weak with encouragement and consolation and this is an instinct of social evolution. Indeed a great part of our social evolution has come about when society went out to help the weak. All our medical sciences developed on this principle, so that from this instinct has come help not only for those who were the object of compassion, but for the whole of humanity. It is not an error to encourage those who are weak and those who are inferior, it is the correct thing and it carries forward the whole of society. Children show these sentiments as soon as they become normalized, not only for each other, but for animals too.

Everyone thinks that respect to animals has to be taught, as they think that children tend to cruelty towards them. This is not so, they have an instinct to protect them. We had in our school at Kodaikanal a baby-goat. I used to feed it daily and held the food high so that the little one

used to rise up to it on its hind legs. I was interested in watching the baby-animal do this and it seemed to enjoy it. But one day a little child with a look of anxiety on his face came and held the goat with his two hands under its body, because he thought the baby-animal should not have to depend on only his two hind legs. This was a very delicate sentiment.

Another manifestation in our schools is the admiration for those who do better than oneself. The children are not only not envious at all, but the achievements of other children evoke an enthusiastic admiration and joy. This was what happened in the famous incident of the explosion into writing. It was the first written word and it caused a great joy and laughter and they looked at the writer with admiration and then it suddenly inspired them to write : " I can do this too ! " The good work of one brought the uplift of the whole group. It was the same with the enthusiasm for the alphabet, so that it happened once that the whole class formed a procession with the letters as flags, and there was so much joy and shouting in glee that people came up from downstairs (we were on the roof) to see what all the joy was about. " They are enthusiastic over the alphabet " said the teacher.

There is an evident communication among the children based on a high sentiment and so there is unity in the group. From these instances one realizes that there is a sort of attraction in an atmosphere of high sentiment when the children are normalized. As the

older ones are attracted to the little ones and the little ones attracted to the older ones, so the normalized are attracted to the non-normalized (new) children and *vice versa.*

CHAPTER XXIV

SOCIETY BY COHESION

I WOULD like to relate another episode out of my memorable experience. One day I thought I would give a lesson on a subject which in itself was hardly attractive. I taught the children how to blow their noses and they evidently were greatly interested in my lively demonstrations. I showed them how different people blow their noses, some ostentatiously unfolding their handkerchief and making a lot of noise, and on the other hand the well-educated person who does so almost hiding the necessary movements and even with the least perceptible noise. What struck me was the serious way in which the children followed me. Not one began to laugh. When I had finished, to my immense surprise, the audience of infants burst out into loud applause. Never had I witnessed such manifestation. Never, as far as I know, in world history had a gathering of small children applauded a speech.

Yet, not two or three children only, but all of them at the same time clapped with great enthusiasm their

small hands which until then had only "worked". I went out as usual and after having walked along the footpath for a little while I turned round and saw to my amazement that *all the children* had been following me. They really looked like a swarm of bees, only they moved so silently that I had not been aware of them. What a curious situation! What would the passers-by have said if they had seen a lady walking in the street, followed at some distance by this solid group of forty-five tiny children? I turned to them and said calmly: "Now run back to school, all of you, but on tiptoe and take care not to knock against the door-post". I gave this instruction, because I knew that exactitude in actions has great interest for such young children. As by magic they all turned their back on me and ran off on tiptoe. When they reached the door they made a wide curve and avoided the corner, entering through the centre of the door-opening. Thus they disappeared.

"Why such enthusiasm?" I thought. Perhaps I had happened to touch a social question to which they were very sensitive. In fact all children are generally humiliated on account of their dirty noses. In Italy vulgar people call the child "a snotty one" instead of calling him a child. Small children have always dirty noses and the mothers of the people sometimes attach a handkerchief to the child's dress with a safety-pin, right in front of their body. This evidently they feel as a humiliating sign of inferiority. Perhaps that was the

reason of the success of my lesson. I had given them a lesson instead of showing contempt. Now they had acquired knowledge which redeemed them and raised their personal dignity. My action had somehow been similar to that of a popular leader, of a revolutionary who tries to raise the masses and defends their human dignity.

This miniature episode was really surprising, but the main fact was that these children *felt and acted* as a group. They really formed a *society* of children, united by a mysterious bond, and acted as one body. This bond was formed by a common sentiment felt by each individual. Although they were "independent individuals", although they did not depend on one another, they were all moved by the same impulse.

Such a society seems to be more closely connected to the *absorbent mind* than to consciousness.

The lines of construction which we have observed seem to be analogous to those which we can follow through the microscope when we observe the work of the cells building up an organism. Evidently also society has an embryological phase which can be observed in its initial formation among children in course of development.

It is very interesting to see how, slowly, they seem to become conscious of forming a community which acts as such. They seem to become aware of belonging to a group and of contributing to the activity of that group. They not only begin to be interested in it, but I would

almost say that they delve into it with their spirit. When they reach this stage they do not act mechanically any longer, they aim at success, they give special consideration to the honour of the group. This first step towards full social consciousness I call "*clan spirit*" comparing it to those primitive human societies wherein the individuals already love, defend and appreciate the value of their group as an aim of each individual's activity.

The first manifestations of this phenomenon amazed us also, because they appeared independently of any influence of ours. They came forth as facts successively expressing development, just as at a certain age the teeth are seen to pierce the gums. This association brought about by natural urges, directed by a power within itself, animated by a social spirit, I call '*Cohesive Society*'.

I came to this conception by some spontaneous manifestations of children which amazed us very much. Let me give an example of them : I knew that some important visitors from the United States were to come and see the school the next day. I, however, could not possibly be there to receive them. Before going away I told the children as a matter of confidence : "To-morrow some people are coming to see the school. How happy I would be if they said : "This is the school with the nicest children in the world." I uttered this sentence without any afterthought, almost involuntarily, and did not think it would have the slightest consequence.

When I came back to the school another day I found the teacher quite excited, she was in tears when she spoke to me. "You should have seen these children! Every one of them worked and they were full of enthusiasm. They greeted the visitors very politely. I was really moved to see how each of them did his best. Whoever directed them? It must have been the holy Angels themselves!" They evidently felt the honour of their clan and acted in a way even more impressive than when they only obeyed their vital urges. They had been capable of feeling something beyond their individual needs.

Similar experiences were often repeated. When the Ambassador of the Argentine wished to see this famous school where children of only four and five years old worked on their own, read and wrote spontaneously and behaved with discipline not imposed by the authority of the teacher, he was really very incredulous. Instead of announcing his visit he wished to pay a surprise-call. Unfortunately he came just on a holiday and the school was closed. This school was the 'Casa dei Bambini' established in the block of flats where the children lived with their families. A small child happened to be in the court-yard when the Ambassador came along and heard his expressions of disappointment. The child understood that he was a visitor and told him: "It does not matter that the school is closed, the janitor has the keys and we are all at home." The door was opened and all the

children came to their class and began to work. They felt a kind of responsibility to do well for the honour of their clan. Nobody received any personal benefit from it, nobody wished to distinguish himself, all co-operated for their community. The teacher heard about it only the day after.

This social feeling that had not been instilled by any teaching and was completely different from a competitive sentiment or a personal interest, was like a gift of nature. Yet, it was definitely an achievement which these children had reached through their own efforts. As Coghill says: "Nature determines behaviour, but it is developed only by means of experiences in the environment." Nature evidently gives a design for the construction of the personality and of society, but this design is realized only through the obedient activity of the child when he is in a position of bringing it to actuality. In doing so he illustrates the successive phases of development. This clan-spirit which pervades the cohesive society corresponds closely to what the modern American psychologist and educationist, Washburne, calls 'social integration'. He maintains that this is the key to social reform and should constitute the basis of the whole of education. Social integration is realized when the individual identifies himself with a group to which he belongs. A person possessing it thinks of the success of the group rather than of personal credit. Washburne tries to explain his conception by means of a comparison

to the Oxford and Cambridge boat-races. "Each individual there makes the greatest possible effort for the honour of his team, fully aware of the fact that he personally will not derive any benefit nor any credit from it. If this were the case in every social enterprise, from nation-wide enterprises to those in industry, etc., and if all let themselves be spurred by the desire of success for the whole of which each forms part, the entire human society would be regenerated. In the schools the development of this feeling of integration of the individual with society should be fostered, because," he adds, "this is what is lacking everywhere and leads society to failure and ruin."

The example of a society where social integration exists can be given : it is the cohesive society of young children, achieved by the magic powers of nature.

We must consider it and treasure it where it is actually being created, because neither character nor sentiments can be given through teaching : they are the product of life.

Cohesive society, however, is not the same as the organized society that rules the destiny of man. It is merely the last phase in the evolution of the child, it is the almost divine and mysterious creation of a kind of social embryo.

Organized Society

At once after six years of age when the child enters another phase of development which marks the transition

of the social embryo to the social new-born, another spontaneous form of social life appears very clearly. It shows an organized association, fully conscious of itself. The children then look for principles and laws established by man himself. They seek a leader who directs the community. Evidently obedience to the rules and the leader forms the connective tissue of this society. This obedience has, as we know, been prepared in the embryonic stage which precedes this period of development. MacDougall describes this type of society which children of six and seven years of age already begin to form. They submit to other, older children as if urged by an instinct which he calls the 'gregarious instinct'. Often neglected and abandoned children now organize gangs—groups associated especially in revolt against the principles and the authority of adults. These natural urges, however, which often lead to a rebellious attitude have been sublimated in the Boy Scouts movement. The latter answers a real social need of development, instilled in the very nature of children and youths.

This 'gregarious instinct' is different from the force of cohesion which was the basis of the society of infants. These successive societies which continue to develop until they reach the society of adults are all consciously organized societies, they all require man-made rules and a leader to direct them.

Life in society therefore is an innate fact, belonging to human nature as such. It develops as an organism,

having different characteristics during its natural evolution. We would compare it to the manufacture of cloth, to weaving and spinning in the manufacture of home-spun cloth which is such an important part of Indian cottage industry. Without doubt we then have to begin at the beginning and consider first that small white fluffy tuft which the cotton plant produces around its seed. So when we wish to consider the construction of human society we must begin with the child and look at him in the surroundings of the family which has given birth to him. The first thing that is done with cotton, which is also the first work in Gandhi's village schools, is to purify the cotton harvested from the plants. The black bits left behind in the cotton by the shell of the cotton seeds have to be cut out. The first activity corresponds to what we do when we gather the children from amongst their homes and purify them of their deviations and help them to concentrate and normalize themselves. Then comes the spinning. Gandhi who has indicated spinning as a means to achieve the liberation and re-birth of India has placed a great symbol in front of the Indian people. Spinning corresponds, in our simile, to the formation of the child's personality accomplished through work and social experiences. This is the basis of all : the development of the personality. If the thread is well spun and strong, the cloth woven from it will equally be so. The quality of the cloth depends upon it. In this symbolic sense the Mahatma's emphatic assertion : " I have

consideration only for those who spin ", is very right. It is indeed the principal thing to be considered, because cloth woven from threads without resistance has no value.

Then comes the stage when the threads are put on a loom, on a limited frame. The threads are taken up and all stretched in the same direction and then fixed to the staffs at both ends of the loom. The threads are all parallel, of equal length, separate and they do not touch each other. They form the woof of a piece of cloth, but are not cloth. However, without this woof cloth could not be woven. If the threads break or go astray without being fixed in the same direction, the spool cannot shoot through them. This woof corresponds to the cohesive society. In the embryonic preparation of human society it depends on the activity of the children who act upon the urges of nature in a limited environment, corresponding to the loom. In the end they associate themselves, everyone tending to the same aim.

The actual weaving then takes place by passing the spool through these threads and thus uniting them all, keeping each one firmly in place by means of the transversal threads closely pressed together on the woof. This stage corresponds to the real organized society of men which is fixed by rules under the direction of an acknowledged leader whom all obey. Then only we have a real piece of cloth which remains intact even when taken off the loom. It has an existence independent of the loom and once taken off it can be utilized. An

unlimited amount can be produced. Men do not form a society because each individual has turned towards some aim in the environment and has concentrated himself upon it on his own account, as happens in the cohesive society of small children, but the final form of human society rests on organization.

The two things, however, are interlinked. Society does not depend only on organization, but also on cohesion. The latter in fact is the more fundamental of the two and serves as a basis for the construction of the former. Good laws and a good leader cannot keep the masses together and make them act, unless the individuals themselves be already oriented towards something that fixes them, and makes a group out of them. The masses in their turn are more or less strong and active according to the degree of development of the personality of the individuals who make them up. The organization of society depends therefore not only on circumstances and events, but first of all on the formation of the individuals and their inner orientation.

The Greeks, *e.g.*, had as the basis of their social constitution the formation of the personality. Their leader, in later times, Alexander the Great, conquered with but few men the whole of present day Persia. Let us also look at the Muslims : they represent a formidable union, not so much on account of their laws and leaders, but because they are united in cohesion by a common ideal. Periodically they take to the road in masses and

go as pilgrims to Mecca. These pilgrims do not know each other, they have no private interests nor ambition : they are all individually directed towards the same goal. Nobody pushes them on, nobody commands them, and yet they are capable of immense sacrifices to achieve their aims. These pilgrimages are accomplished only by cohesion.

In the history of Europe during the Middle Ages we see something that the leaders of our war-torn times try in vain to achieve : then there were really the United Nations of Europe. And how did it happen ? The secret of this success lay in the fact that all the individuals of the nations and European empires had been conquered by one and the same religious faith which formed a formidable force of cohesion. Then we really saw kings and emperors each ruling his own people according to his own laws, but all subject to and dependent on the force of Christianity. Cohesion, however, does not suffice to construct a society which acts practically upon the world creating civilizations by means of intelligence and labour. In our own times, we observe the Jews who are united by a millenarian force of cohesion : but they are not organized and do not exist as a national power. They are only the woof of a people.

It is noteworthy that in the most recent times we had a new example of this in history. Mussolini and Hitler were the first to realize that in order to achieve

success in conquest the individuals should be prepared from their very infancy. The "Figli della Lupa" (sons of the wolf—the name of the organization of Fascist children) and the "Balilla italiani" (name of the organization of older children) just as the "Hitler Jugend" (Hitler Youth, as the Nazi youth organization was called) were set up years before these two leaders began to step up the armament of their countries in view of war. They prepared the children and the youths during the years of schooling and imposed upon them from the outside an ideal that would unite them. This was a new, logical and scientific procedure whatever its moral value may have been. These leaders understood the need to have a "cohesive society" as the basis of their plans and prepared it from infancy.

The cohesive society, however, is a natural fact and must be constructed spontaneously on the creative urges of nature. Nobody can substitute himself for God and whoever tries to do so in society becomes a devil like the adult who in his pride crushes by repression the creative energies of the child-personality. Also the force of cohesion in adults is something which is attached to cosmic directives, to ideals superior to the mechanism of organization. There ought to be two societies, interwoven among themselves, one of them, we might say, has its roots in the subconscious and creative unconscious mind, the other depends upon men who act consciously. We could also express it as follows:

one begins in childhood and the other is superimposed upon it by the adult, because, as we have seen in the beginning of this volume, it is the absorbent mind of the child which incarnates the characteristics of the race. Which are the characteristics it incarnates almost as if it realized another form of heredity found only in man ; a heredity which does not depend upon the hidden genes of the germinative cell, but comes from the other creative centre, the child ? The characteristics which the child incarnates when he lives as a *spiritual embryo* are not the discoveries of the intellect, nor of human labour, but those characters which are found in the cohesive part of society. He, the child, gathers them and incarnates them. By means of these characteristics he builds his personality : thus he becomes a man with a particular language, a particular religion, a particular set of customs. What is fixed, and fundamental, what is 'basic', to use a fashionable term, in an everchanging society is its cohesive part.

When we leave the child to develop, when we leave him to build up the adult man from the invisible roots of creation, then we can learn the secrets upon which depends our individual and social strength.

Instead of this—and we have only to look about to see it—nowadays men only judge and act and regulate themselves by the conscious and organizatory part of society. They wish to strengthen and assure the organization as if they alone were its creators. They have no

consideration for the bases indispensable to that organization. They only allow for human direction and their aspiration goes towards the discovery of a leader.

How many hope for a new Messiah, for a genius of conquering and organizing power! After the first world-war it was proposed to found schools for the preparation of leaders, because it was seen that those there were had insufficient training and were unfit to direct world events. There were really attempts to try and find out by means of mental tests which were the supernormal persons, youths who in their school years were the most intelligent, in order to train them for leadership. But who could train them if precisely there are no good leaders, teacher-leaders?

It is not the leaders who are lacking, or rather the question is not limited to this detail. The question is much vaster and it is the masses themselves who are completely unprepared for the social life of our actual civilization. The problem, therefore, is to train the masses, to re-constitute the character of all the individuals, to harvest the treasures hidden in everyone of them and to develop their values. No leader can achieve this, however great his genius may be.

Just as a great literary genius would not be sufficient to make literates out of millions of illiterates, even if he had unlimited powers, because it would be necessary for those millions to learn how to read and to write,

each one individually, (and this can be done by children only), so also in this far greater question.

This is the most practical and urgent task of our critical times. The fact is that the human masses are inferior to what they could be. We saw it in the diagram of the two forces of attraction, one coming from the centre and the other from the periphery. The great task of education must consist directly in trying to save normality which on its own strength tends towards a centre of perfection. Now, instead, all that is done is to prepare artificially weak and abnormal men, predisposed to mental diseases, in need of unceasing care and small exercises in virtue so that they may not fall towards the periphery where, once fallen, they become extra-social beings. This which actually happens now is really a crime of lese-humanity which has a repercussion on everyone of us and which may yet destroy us. The mass of illiterates which covers half of the surface of the earth does not really weigh upon society ; what does weigh upon it is the fact that we are ignorant regarding the creation of man, that we trample upon the treasures deposited by God himself in every child without even being aware of it, because here is the source of the intellectual and moral values which can raise the whole world upon a higher plane. We weep in front of the dead and we aspire towards saving humanity from destruction, but it is not the salvation from dangers, it is the elevation that is the destiny of everyone of us which

should stand before our mind's eye. It is not death, but the lost paradise that should afflict us.

The greatest danger lies in our ignorance, in the ignorance of us who look for pearls in oyster shells, for gold in rocks, for coal in the very entrails of the earth, but ignore the spiritual germs, the nebulae of creation, which the child hides within himself when he comes into our world to renew mankind.

If this spontaneous organization and the possibility to move easily and at will from one class to another were allowed for in ordinary schools, it would bring a great betterment, because in the ordinary schools people start from the opposite point of view. They believe children are not active in learning and so they urge or encourage, punish or give prizes to foster activity. Competition also they use as an encouragement to give animation to effort. People generally seem to be animated by a search for the evil in whatever there is in order to fight against it. The attitude of the adult is to seek evil to suppress it, then to criticize and judge malevolently is a necessity. But the correction of an error is a humiliation and discouragement and as this is the basis of education generally, the whole of it is based on a lowering of the level of life. No copying allowed, so no union, it is a sin in the school to help an inferior pupil ; the pupil who helps one who does not know his work is considered as guilty as the one who accepts the help, so a morality is imposed which lowers the level. Again we

hear all the time " Don't fidget ! ", " Don't prompt ! ", " Don't help ! " " Don't answer when not asked ! " All DON'Ts, all negations. What must we do with this situation ? Even if the average teacher did try to uplift his class, he would do it in a way opposite to that of the children. The maximum he would say is probably : " Don't be envious if one is better than you " or " Don't seek revenge if someone has upset you ". Ordinary education apparently cannot be understood without negation. The general idea is that everyone is wrong and we must help them to become less wrong than they are. But children do things that do not occur to the teacher ; they would *admire* the one who was better than they, not merely be just ' not envious '. One cannot however *command* admiration of a rival, so the teacher is limited. What can she do ? Certain attitudes of the spirit cannot be commanded if they do not exist. If the existence however is there and is instinctive (as it is) then how important it is to hold and encourage it. It is the same with the law : " Don't seek revenge." The child frequently makes one who hurts him or takes his place in the lime-light his friend, but one cannot *command* that. One must have sympathy and love for those who do evil, but it is not possible to *command* that. One must give help to the incapable, but one cannot *command* that. So there are sentiments in the soul of the child which cannot be commanded, but are there naturally and should be upheld. Unfortunately they are

generally stifled and all the work in schools is in the inferior white zone of figure 14, with its pull towards the periphery of the anti-social and the extra-social. The teacher first thinks that the child is incapable and must be made capable, then he proceeds to do so by saying : " Don't do this or that " ; " Don't slide to the periphery " in other words. An effort is made to keep the sliders from sliding and that is all. But all the time normalized children are showing us an exaggeration of good instead of this emphasis on avoiding evil. The interruption of work by the hours fixed by a time-table and the periods of rest is also negative. " Don't work too hard at one thing or you will be tired ", whereas the child shows clearly the desire for the maximum effort. The ordinary schools could never help the creative instincts of children, because there is an exaggeration of activity on the part of the child. The exaggerated activity, to work a great deal, to find all work beautiful, to console the afflicted and help the weak are all instincts of these young children. A comparison between the ordinary school and normalized children reminds me of the Old Testament of the Bible and the New Testament. The Ten Commandments of the Old Testament—the book of the old religion—are mostly negative : " Don't kill ", " Don't steal ", all don'ts ; these are for inferior people and are necessary for those who are confused, but the New Testament shows Christ as similar to the children ; it says positive things—an exaggeration of what one would

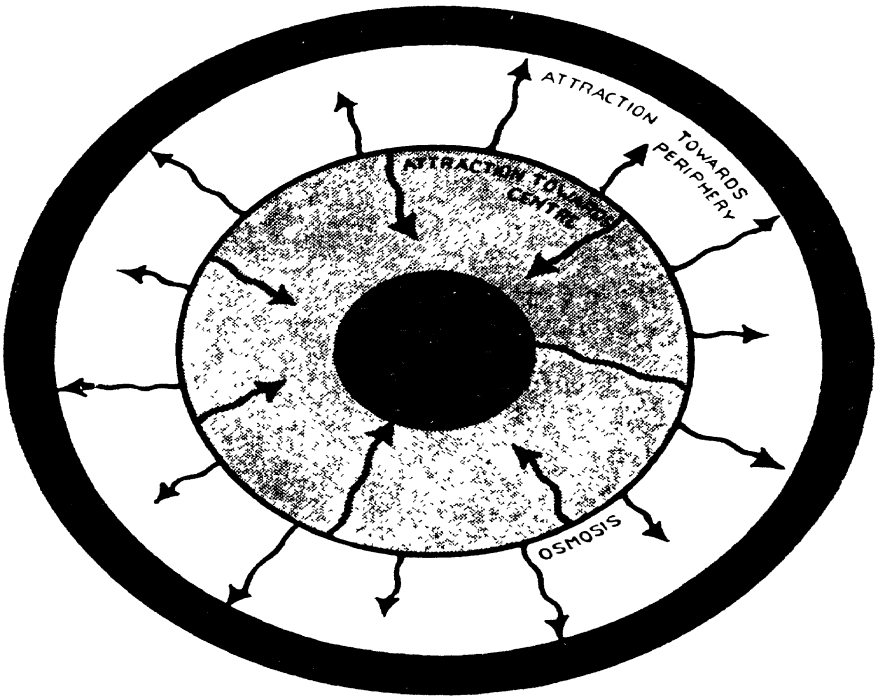


Fig 14. Circles of attraction towards superior and inferior types

usually do ; *e.g.*, : " Love your enemy "—an exaggeration of positiveness. So also when there came people who seemed superior to many, who followed the laws and wanted approbation for that, Christ said : " I have come for the sinners " (the inferior). To this the children's nature corresponds. It is an exposition of the exaggeration of good. What, however, are the consequences ? It is not sufficient to teach these principles to man, nor is it sufficient for man to have them ; it is useless to repeat : " Love your enemy ; " even if it is said, it is said in church, but not on the battlefield, there just the opposite is done. The people who say : " Don't kill " are merely drawing attention to the evil in order to protect themselves, because the good to them is unpractical. Loving your enemy seems unpractical so it mostly remains an empty ideal.

Why does this happen ? Because the root of good does not exist in the heart of man ; it may have been there once, but it is dead, it has disappeared. If during the whole period of eduation hate, rivalry, competition have been encouraged, how can we expect people grown in this atmosphere to be good at twenty or thirty, because somebody preaches goodness ? I say, it is impossible. No sensorial organ in the spirit has been prepared to collect this preaching or if it began to be prepared, it was destroyed, so the preaching flies away on the wings of the wind.

Creative instincts, not preaching are the important things, because they reveal a reality, young children act

as nature urges them to act and not because the teacher tells them to do so. Good should come about by reciprocal aid, by union brought about by spiritual cohesion. This society by cohesion which has been revealed by the children is the basis of all organization ; that is why I maintain that it is not we who can teach children between the ages of three and six years. We can observe in a refined manner and see how development is achieved by every daily and hourly exercise. That which nature gives is developed by constant exercise. Nature provides a guide but it is also revealed that to develop anything in any field, continuous experience and effort is necessary. If I have not had the opportunity for this, preaching is useless. Growth comes from activity, not from intellectual understanding, hence the education of small children is important, and especially between the ages of three and six years, because this is the embryonic period for the formation of character and for the formation of society (just as the period from birth to three years is the embryonic period for the formation of the psyche ; and the prenatal period, the embryonic period for the formation of physical life.) The things that the children carry out between the ages of three and six do not depend on doctrine, but on a divine directive given by God to the spirit undergoing construction. They are germs of behaviour and can develop only with the right environment of freedom and order.

CHAPTER XXV

ERROR AND ITS CONTROL

WHEN we say that the children are free in our schools, organization is necessary, an organization more detailed than in other schools, so that the children may be free *to work*. The child, by carrying out experiments in a prepared environment, perfects himself, but a certain amount of apparatus is then necessary and space is necessary. Once the child has achieved concentration, he continues to be concentrated through many activities, and as he becomes more and more active, the teacher becomes less and less so, till she is almost put aside.

We have mentioned that through exercises repeated in freedom the children join together in a special society and this society is so much more refined than ours that it inspires the wish and conviction that the children should be left free and not interfered with. It is a phenomenon of life, a phenomenon as delicate as the phenomena of embryonic life and it should not be touched. If these conditions are present it can happen with any of our materials.

In this environment there is a definite relation between the teacher and the child. The teacher's task, which is determined in detail, shall be outlined in another chapter, but one of the things she must not do is to interfere, to praise, to punish or to correct errors. This seems a wrong principle to most educationists and when we find them opposed to our method, it is always on this point. They say : " How can we improve the children's work if we do not correct the errors ? " In ordinary education the fundamental task is to correct both in the moral and intellectual field, else the teacher does not feel she has done her job. Education walks on the two feet of the giving of prizes and of giving punishments ; but if a child is given prizes and punishments it means that he does not have the energy to guide himself and that the teacher is hovering over the child and directing him. In our schools they automatically disappeared because there was no need for them. Prizes and punishments come from outside, so when they are given the spontaneity of spirit disappears ; and as this is a method of spontaneity, it makes no sense to give prizes or punishments. This is so difficult to understand that even in so-called Montessori schools they are given ; how often have I been invited to a prize-giving in such ' Montessori ' schools ! Whereas if the children are given freedom, they are absolutely indifferent to prizes.

In my first experiment, the teacher who was, as I have mentioned, the caretaker's daughter, also had this

idea of prizes and punishments. After all it is so common in the home as well as in the school, that it is almost incarnated in the soul of man. I was against it then, but had no method as yet, and I tolerated it because the poor teacher had to have something to do. She made big 'military' crosses in gold or silver paper as rewards and pinned them to the breasts of the children rewarded, with a silk ribbon. I did not think much of the idea, but I left it alone. One day I went to the school and found a child seated all by himself on a chair in the middle of the room and wearing a large cross. I asked: "Have you given a prize to this one?" The teacher said: "No, he was being punished; that is why he is sitting alone." The cross had actually been given to another child, but it was in his way as he worked, so he gave it to the child in the middle who had nothing to do and with whom it would not interfere! And the child in the middle was indifferent both to the cross and to the punishment! We found also that sweets and such rewards were not appreciated.

The abolition of prizes might not have aroused much trouble, because after all it would mean an economy. Only a few get them in any case, and those at the end of the year. But punishments! That was a different matter, they happen every day throughout the year and 'corrections' are still more frequent. What does this correction, in copy-books for example, mean? It means putting a mark A, B, or C or 10 or 0. How can the

marking of a zero be a correction? Then the teacher says: "You always make the same errors; you don't listen when I speak; you will fail in the examination". All these corrections in books and these accusations of the teacher result in a lowering of energy and interest. To say: "You are bad" or "You are a dunce" is humiliating; it is an insult, an offence, but it is not a correction, because in order to correct oneself one must become better, and how can a child become better if he is below level already and then we humiliate him further? In olden times teachers used to put donkey's ears to children when they were stupid, and beat the tips of the fingers of those who could not write. If they had used all the paper in the world making donkey's ears and beaten the fingers to pulp, they would have corrected nothing. Experience and exercise alone correct errors, and the acquisition of faculties demands long exercise. If a child lacks discipline he becomes disciplined through work and association with others in a society of cohesion, not by telling him that he is undisciplined. If you tell a child he cannot do something, he could quite easily tell you: "You are telling me that? I know I can't." That is not correction, but a presentation of facts. Correction and perfection come only when the child can exercise himself in freedom for a sufficiently long time.

Errors can be made and the children may not always see them, but teachers also can make errors and not know

they are errors. Unfortunately the teacher usually starts as if she were a perfect being and an example, so if she makes a mistake she certainly does not tell the child about it. Her dignity is based on always being right. In the ordinary school she must be infallible, so the whole of education there is on a false basis.

Let us consider error itself. It is necessary to admit that we all make errors ; it is a reality of life so that admission in itself is a great step in our progress. If we are to walk on the path of truth and reality we must admit that we all make mistakes or else we should be perfect. So the best thing is to become friendly with the error and then it will not frighten us any more, but will be a friendly person living among us and will perform its task, because it has one. Many errors are corrected spontaneously through life. A child of one year walking on the line, walks unsteadily, rolls, falls, but finally it walks correctly. He corrects his errors *through growth and experiences.* We have an illusion that we are walking along the path of life towards perfection, we are all the time making errors and do not correct them. We do not recognize them, so we are out of reality altogether and in illusion. The teacher who poses as perfect and does not recognize that she makes errors, is not a good teacher. No matter where we look, we always find Gentleman Error ! If we set out on the path towards perfection, we must look carefully at error, because perfection will come by correcting it. We should use a

light to show the error. We must know there is error as there is life ; it is as real as that.

The exact sciences (mathematics, physics, chemistry, etc.) have called attention to errors, because these sciences purposely make them stand out. The scientific study of error has begun with the positive sciences, those which are considered to be without error, because they measure exactly and can appreciate error. There are therefore two things in life : (i) to reach a certain exactness : (ii) to appreciate error in exactness. Whatever science gives, she gives as an approximation, not as an absolute, and this approximation is considered *with* the result. For example, an anti-microbe injection is certain in 95% of the cases, but it is important to know that there is 5% uncertainty. Also in taking a measurement it is stated correct to so many thousandths of an inch. In science no data are given or accepted unless with the indication of probable error and what gives importance to the data is the calculation of the error. No data are considered seriously, unless the amount of probable error is given and attached to the result, it is as important as the result itself. So if it is so important for the exact sciences, how much more important it is for our work. Then error becomes something interesting and important, and the knowledge of it is necessary for correcting or controlling.

We then reach a scientific principle, which is also a principle of truth, *i.e.*, the ' control of error.' In whatever is done in school by teacher or children or by others,

there must be error and this must so enter into the school-life that there is no outside *correction, but an individual, independent control of error,* that tells us whether we are right or not. I must know whether I have worked rightly or not, therefore error becomes interesting to me whereas before it was superficial. In the usual school one makes errors without knowing it, unconscious and indifferent to it, for it is not I, but the teacher who makes me conscious of errors. How far off from the field of freedom ! If I do not have the ability of controlling my error, I have to go to someone else who may know no better than I. Instead, how important one becomes, when one knows one is making mistakes and can control them ! One of the greatest realizations of psychic freedom is to realize that we may make a mistake and can control it ; to recognize and control error without help. One thing that makes for indecision of character is that we are unable to control anything without the help of someone else. There is a sense of inferiority, of discouragement and a lack of confidence, when one has to rely on others to tell one where one is wrong. So the control of error becomes the guide which tells us whether we are proceeding on the right path or not. We have an instinct to go towards perfection ; we want to be able to know for ourselves whether we are on the right path.

Supposing I want to go somewhere and I can drive a car, but I do not know the road ; this often happens in life. In order to be sure that I go right, I take a map ;

also I see several signs which tell me where I am. I may have been seeing signs which said "2 miles to Ahmedabad," but if then I suddenly see a sign that says "50 miles to Bombay", I know I have gone wrong somewhere. The map and the signs have helped me; if I had had no map I should have had to ask and be told many things probably contradictory in their advice. If there is no guide or control it is impossible to go on.

What is necessary therefore in positive science and in practical life must also be included in education from the very beginning: the possibility of a control of error. So *with* the teaching and the material must go the control of error. The way to go forward is to have freedom and a sure way, with the means of telling ourselves when we make a mistake. When this principle is realized in the school and in practical life, it does not matter whether the teacher or the mother is perfect or not. Errors in older people become interesting and the children have sympathy with them. It becomes something interesting, but completely detached. It becomes an inherent fact in nature, and how much affection it provokes in the hearts of children that we can all make mistakes. Another factor enters the relationship between mother and child. The fact that we can all make mistakes makes us more friendly. Brotherhood comes along the path of errors, not along the path of perfection. If one is perfect one cannot change any more, two 'perfect' people together usually fight, because there is

no possibility of change and of understanding each other. If one has grown up without error, there is no progress and no help possible, because one cannot help the perfect. If, therefore, we think we are perfect, we are not in the field of truth; one is misled by the illusion of perfection one puts before one's eyes, but never achieves.

Let us make a geometrical comparison: we can superimpose squares one on the other, as is done in one of our children's exercises with inscribed squares. As we continue inscribing squares to a further and further degree, we gradually reduce the difference between the last one and that immediately before it. If we think of this as gradually reducing the 'error' between the squares, we find that, however small it eventually becomes, yet we never reach the complete elimination of error. Let us look at one of the earliest practical exercises the children do. We have cylinders all of the same height, but differing in diameter which fit into corresponding sockets. Recognizing that they differ is first perfectionment, holding them with three fingers is another perfectionment. The child begins to place them in their sockets, but when he has finished he sees that he has made a mistake for a thick one is left whilst there is only a thin hole for it to fill, and some of the others are loose and rattle, so he looks at them again and observes them more carefully than before. The child knows he can make a mistake and that if he does so, one cylinder cannot be fitted. If there were not this possibility of

mistake there would not be the same interest. It is this that makes him repeat the exercise again and again. So the material has two requirements to meet : (i) to refine the senses of the child, (ii) to provide a possibility of control of error.

The above mentioned material has a control of error which is very material and visible, so a little child of two years can use it and with it acquire the knowledge of control of error on the path to perfection. With daily practice in such exercises the child gains power to control error and becomes sure of himself. To be sure of oneself does not mean perfection, but it means to know one's possibilities and, therefore, to be able to do something. He may say : " I am not perfect ; I am not omnipotent but I know this thing and my strength and I also know that I can make mistakes and control them, so I am sure of my path." There is prudence, certainty and experience. These lead towards perfection, not that some one says, one is this, that or the other. In other words to arrive at this sureness is not so simple as one supposes ; to be on the path towards perfection is not so simple either. To tell anyone he is silly, stupid, brave, good or bad is a betrayal of humanity ; one must be sure for oneself and it is necessary to give the means of development and the control of error for this.

Let us look a little later at a child thus trained. There are mathematical exercises, *e.g.*, multiplication sums. With the sum there is a table of multiplication,

which serves as a control of error. Without it there is no possibility of being sure whether one is right ; so instead of the teacher correcting, we let the child get into the habit of controlling his own errors. This control of error is more attractive than the exercise itself. So with reading. The child has an exercise of written cards to put with the specimens of those names, and then there are cards with the names written underneath to control his work. The attraction is in finding out whether he was right or not.

If in the practice of school-life there comes this opportunity for constant control of error, this leads to perfection. The interest in the progress to perfection and the control of error is so important to the child that progress is ensured. By nature the child leans to exactness and so this control interests him very much. In one of our schools a child had a reading command which said : " Go out, close the door and come back ". The child studied it and started to carry it out ; then she came to the teacher and said : " Why did you write it like this ? It cannot be done. How can I come back if the door is closed ? " So the teacher said : " Yes, my mistake," and rewrote it, and the child said with a smile, " Yes, now I can do it."

Fraternity arises from this interest in the control of error. Error divides men, but control of error is a means of fraternity. It becomes a universal interest to overcome error no matter where it is found. The error itself

becomes interesting. It becomes a link and certainly it becomes a means of cohesion among all beings, but especially between the child and the adult. Finding a small error in the adult does not lead to lack of respect or a lowering of dignity. Error is detached from the person and made a thing apart which can be controlled.

Thus simple steps lead to great things.

CHAPTER XXVI

THE THREE DEGREES OF OBEDIENCE

THE main preoccupations in ordinary character education concern the will and obedience, and generally the two ideas are opposed in the minds of those preoccupied with them. One of the main aims is to curb the will of the child, to substitute for it the will of the adult and to demand obedience from him.

I would like to clarify these ideas, basing myself not on any opinion of my own, but on my experience. First of all we must admit that there is a great confusion in these topics. Some biological studies tell us that the will of man is part of a universal power (horme), and that this universal force is not physical, but a force of life along the path of evolution. All life is urged irresistibly towards evolution, and this urge is called horme. Evolution is governed by laws and is not haphazard or casual. These laws of life show us that the will of man is an expression of that force and shapes his behaviour. In childhood this force becomes partly conscious as soon as the child carries out a certain self-determined action and

then this force is developed in children, but only through experience. So let us begin by saying that the will is something which must develop and, being natural, it obeys natural laws.

Confusion in this subject is also shown by the thought that the voluntary actions of children are naturally disorderly and sometimes violent. This is so generally admitted because people see these sorts of actions in the child and think they express his will. It is not so, these actions do not belong to the field of the universal force or horme. Let us consider the behaviour of adults ; suppose we mistook convulsions in a man for voluntary manifestations, or actions performed in a frenzy of anger to be directed by his will, that would clearly be absurd. We do not think so ; we think of a person of will primarily as someone who carries out something purposive and difficult. If we consider voluntary actions to be mainly disorderly movement in adult or child, then of course we feel we must curb the will, or 'break it' as the older generation used to say ; and if we find it necessary to break this 'will', then, of course, we must substitute our will for the child's by means of his 'obedience' to us.

The real fact is that the will of man (child) does not lead to disorder or violence ; these are a mark of deviation and suffering. The will in its natural field is a force which compels us to carry out actions considered to benefit our life. The task given by nature to the child is

growth, so the child's will is a force urging to growth and development.

A will that wills what the individual does enters upon a road of conscious development. Our children choose their own work spontaneously and, repeating this exercise of choice, develop a consciousness of their actions. What at first was a hormic impulse urging the child to act now becomes an effort of the will. At first he acted instinctively, now he acts consciously and voluntarily : this is an awakening of the spirit.

The child himself has understood this difference and expressed it in a way that will ever be a precious remembrance of our experience. A society lady once visited the school and, having the old frame of mind, said to a child : " So, this is a place where you do what you like, is it not ? " The child answered : " No, Madam, we do not do what we want, we want what we do." The child felt the difference between doing what one likes and liking what one does.

One thing ought to be clear : the conscious will is a power which is developed by means of exercise, of work. Our aim is definitely to cultivate the will, not to break it. The will can be broken almost instantaneously, the development of the will is a slow process unfolding itself by means of continuous activity carried out in relation to the environment. It is easy enough to destroy ; the devastation of a building can be accomplished in a few seconds by a bomb or an earthquake. How difficult

instead is the construction of a building! It requires accurate knowledge of the laws of equilibrium, of tension, even art is necessary in order to achieve a harmonious construction.

If all this is needed to achieve a lifeless construction, how much more for the construction of the human soul! It takes place from within. The constructor, therefore, can be neither the mother nor the teacher. They are not the architects, they are not almighty to say, like God in the Bible: "Let there be light, and the light was made." They can only help the creative work that comes from the child himself. That should be their function and their aim, but it is equally in their power to destroy it, to break it by repression. This point, darkened by so many prejudices, deserves to be made clear.

The prejudice prevailing in ordinary education suggests that everything can be achieved by mere teaching (that is by directly addressing the child's hearing) or by upholding oneself as an example to be imitated (which is a kind of visual education). The personality instead can only develop by means of individual exercise, through activity. The child is commonly considered as a receptive being instead of as an active individual. This happens in every field. Even the development of the imagination is considered in this fashion. Children are told fairy tales, enchanting scenes of princes and lovely fairies and thus one tries to develop the imagination. The child, however, then only *receives* impressions and

does not really develop his imaginative powers which are the highest of human intelligence. In the case of the will this error is still more serious, because ordinary education does not only deny the will a chance to develop, it actually obstructs this development and directly inhibits the expression of the will. Every attempt at resistance on the part of the child is repressed as a form of rebellion against this pretension. The educator really tries to destroy the child's will. The educative principle of teaching by example does not lead the teacher to picture a phantastic world of princes and fairies, here the teacher goes as far as to uphold himself as a model. And so both imagination and will remain inert, their activity is confined to follow the teacher who tells stories and who acts.

We must deliver ourselves of these illusions and courageously face reality.

In traditional education the teacher reasons in a way which in itself may seem logical enough. It runs like this : " In order to educate I must be good and perfect (this means that I must disguise myself as a kind of Father Christmas who offers gifts to the children). I know what should be done and what should not be done. It is, therefore, sufficient that the children imitate me and obey me." Obedience is the secret basis of teaching.

I do not remember which renowned educationist pronounced the maxim : " All the virtues of the child can be resumed in one : obedience," but there it is.

The task of the teacher then becomes easy and exalting! He says: "In front of me there is an empty being—or a being full of naughtiness—I shall now transform him creating him almost to my image and likeness." He repeats to himself the words of the Bible: "and God created man to His own image and likeness."

The adult, of course, is unconscious of thus putting himself in God's place. He forgets above all the other part of the biblical story where it is told how the devil became such precisely on account of his pride urging him to take the place of God.

The poor child! this being who bears within himself the work of a Creator much greater than the teacher, the father or the mother whose likeness he is forced to acquire. In other times teachers used the stick to achieve this aim and even recently in an otherwise highly civilized nation teachers declared: "If we must renounce the stick, we must also renounce education." Besides, in the Bible we find among the proverbs of Solomon the famous one declaring that if we do not use the stick we are bad parents because we condemn our children to hell. Discipline is enforced by threats and fear. This leads to the conclusion that the child who does not obey is bad, the child who obeys is good.

In this era of the theories of democracy and liberty, when we ponder over this attitude, we are inclined to judge the old type of teacher as that of a tyrant. This, however, would not be true, that kind of teacher is not a

tyrant. A tyrant is much more intelligent. Tyrants have a certain will-power, some originality and a certain dose of imagination. Teachers of the old type instead have only illusions and prejudices and uphold unreasonable rules. The difference between a tyrant and an old fashioned teacher lies in this: the tyrant uses violent means to achieve the success of his aims, the teacher uses violent means to reach the failure of his aims. It is a fundamental error to think that the will of the individual must be destroyed in order that he may obey, *i.e.*, that he may accept and execute the decision of somebody else's will. If we applied this reasoning to intellectual education we ought to say that it is necessary to destroy the child's intelligence in order that he may receive our culture in his own mind.

To obtain the obedience of individuals who have well developed their own will, but decide to follow ours by their own free choice, is very different indeed. This latter type of obedience is an act of homage, an acknowledgment of a superiority in the teacher, which could make him feel proud and satisfied of himself.

Will and obedience are connected in as much as the will is the foundation and obedience marks a second phase in a process of development. Obedience has thus a higher meaning than is generally realized in education. It may be considered as a *sublimation* of the individual will.

Also obedience must be interpreted in a way which places it among the phenomena of life and can then be considered as one of the characteristics of nature.

In our children, in fact, we witness the development of obedience as a kind of evolution. It appears spontaneously, as a surprise. It represents the destination of a long process of perfectionment.

If there were not this quality in the human soul, if men could not reach the point of being able to obey by an evolutional process, society could not exist. If we throw but a superficial glance at the affairs of the world we easily discover up to what extent people obey. This kind of obedience is exactly the reason that causes whole groups of humanity to fall into a chasm of destruction. An obedience without control, an obedience leading whole nations to disaster. There is no lack of obedience in the world, far from it! Obedience as a natural consequence of the development of the human soul is very evident indeed, but the control of obedience is sadly lacking.

Our observation of children in a environment prepared to help their natural development has clearly shown us the growth of obedience as one of its most characteristic coefficients and this observation throws a great deal of light upon the subject.

We have clearly seen in the course of our experience that obedience in children is developed in the same way as the other qualities of the character ; it follows hormic

urges at first, then passes on to a conscious level where it is further developed along several degrees.

Let us first specify what we really and practically mean by obedience. It is after all what has always been meant by it : a teacher commanding the children what to do and the children obeying the command by realizing it.

The natural development of obedience in the child can be divided according to three degrees.

In *the first degree* the child obeys only occasionally, not always. This fact which could be attributed to whimsical behaviour, should be analysed.

Obedience is not connected only with what is usually called " willingness ", it depends on facts of formation. A certain ability and a certain measure of maturity are necessary in order to be able to perform the commanded action. Obedience, therefore, should be judged in relation to development and vital conditions. It is impossible to command " walk on your nose ", because this is physiologically impossible. Neither is it possible to command " write a letter " to a person who cannot write. It is necessary, therefore, to establish first the material possibility to obey in relation to the development reached. That is why a child of 0 to 3 years of age is not an obedient child, he has not yet constructed himself. He is taken up by the unconscious elaboration of the mechanisms of his personality and has yet to reach the point where he can establish them so that they

may serve his own purpose in order to then dominate them consciously. This represents a progress in development. In fact, the customs and the ways in which adult and child live together have led the adult not to expect obedience from a child of 2 years of age. At this stage the adult can only inhibit more or less violently the actions of such an undeveloped child, should he reprove them.

Obedience, however, does not consist of inhibition only. It consists of the performance of actions corresponding to the will of another person, not to that of the child himself. Although the life of an older child is not taken up by the same primitive preparation which we mentioned for the child between 0 and 3 years of age, where it takes place in the secrecy of his life, even at this later stage we find analogous facts. Also the older child must have developed certain abilities in order that he may obey, *i.e.*, that he may act according to the will of another, and abilities are not developed over night. They are the result of an *interior formation* passing through several stages. As long as this period of formation lasts it may happen that now and then the child succeeds in performing an action which corresponds to an acquisition just made, but only when the acquisition has become a permanent asset can the will dispose of it. This is also seen when the child labours to make those primitive mechanical acquisitions of the motor functions, when he acts under the compulsion of the hormic urges

of life. A child of about 1 year of age can make his first steps, but then he falls down and perhaps he will not be able to repeat them for a long time. It is only when the mechanism of walking is completely established that the child can walk whenever he likes. This is a very important point. The obedience of the child at this later stage depends above all on the stage of development of his capacities. It may therefore happen that he can obey the teacher once, but not after that. This inability to repeat the act of obedience is then attributed to " unwillingness ". If so, the teacher with her insistence and criticism may become an obstacle to the inner development that is taking place. In the history of Pestalozzi, the famous Swiss educationist, who had such a great influence on education in schools all over the world, we find a very noteworthy point. Pestalozzi was the first to introduce a so-called paternal gentleness in the treatment of pupils. He was always ready to show sympathy and to forgive. One thing, however, was not included in his forgiveness ; whimsical behaviour, a child now obeying then disobeying. Who had once executed a command was capable of it and if at another time he did not obey the same command, Pestalozzi would not admit any excuse. That was the only time when he showed himself severe instead of indulgent. If this happened in the case of Pestalozzi, how often will not ordinary teachers commit the same mistake !

On the other hand nothing is more harmful than discouragement at the very time when a facet of development is being constructed. When the child is not yet really master of his own actions, when they do not yet obey his own will, he is even less able to correspond to the will of another person. That is why it may happen that he obeys once, being unable to repeat this act of obedience. This does not even happen in childhood alone. How often will a beginner who plays a musical instrument play a piece quite nicely whilst he is unable to do it a second time ? The day after he will be asked to do it again, but he cannot do it as well as he did the day before. The willingness to do so is not at fault, but we face an imperfectly established ability.

What we call the first degree of obedience, therefore, is the period when a child can obey, but is not always able to do so. It is a period when obedience and disobedience exist together.

The second degree is reached when the child can always obey, *i.e.*—there are no obstacles concerning development. His abilities firmly acquired can be called upon and directed not only by his own will, but also by the will of another person. This possibility is a great gift. We could compare it to the ability to translate from one language into another. The child can absorb the will of another person and act accordingly. This is the highest level which generally education tries to reach. The ordinary teacher does not aspire after a

stage beyond that when the child obeys all the time. The young child, however, goes far beyond our expectations, as always when he is given the opportunity to follow the laws of nature. The child does not stop here, but goes on towards the : *third degree of obedience.* Here obedience surpasses the relation to an acquired ability which brings it within reach of the child. Here obedience is directed towards a superior personality, towards the teacher who has served and helped the child. It is as if the child became conscious of the fact that the teacher is capable of things higher than those which he could do by himself. It is as if he said to himself : " This person who is greater than I am can penetrate into my intelligence by her power, she can make me as great as she is herself. She acts in me ! " This thought seems to give the child a great and deep joy. To be able to receive directions from this superior life causes a new form of enthusiasm and joy. It is quite a sudden discovery. The child then becomes anxious and impatient to obey. To what could we compare this marvellous natural phenomenon ? Perhaps to the spirit of the Saint who said : " I am leaping to obey." Or we might compare it, on quite another plane, to the instinct of the dog who loves his master and through his obedience executes the will of a man. When his master shows him a ball, the dog looks at it intensely and when the master throws it away, he jumps and triumphantly returns it waiting for the next command. The dog is craving for commands, he is excited and

waves his tail full of joy. He runs to obey. The third degree of obedience of the young child is somewhat similar, but the child shows his desire to obey in a different manner. In any case, he obeys with a surprising promptitude, and seems impatient to do so.

The findings of a teacher with ten years' teaching experience gives an interesting illustration. She had a class of children which she directed very well, but she could not abstain from advising them. One day she said: "Put everything away, before going home to-night." The children did not wait for her to end her sentence, but as soon as they had heard "Put everything away . . ." they started immediately to put everything carefully, but quickly in its place. Then they heard, to their surprise, "when you go home to-night." Their obedience had become so instantaneous that the teacher felt that she had to be very careful in the wording of her requests. This time she ought to have expressed herself like this: "Before you go home to-night, put everything in its place." She said similar things happened whenever she expressed herself without due care and she felt very responsible whenever she spoke on account of the children's immediate reaction. It was a strange experience for her, because orders seem the natural attribute of authority. Instead of feeling the weight she carried, she keenly felt the tremendous responsibility of her position of authority. She could obtain silence so easily that it was only necessary to write the word silence

on the blackboard, and even then, the moment she started to form the letter 's' and long before she had finished the word, all the children were silent.

The Silence Lesson

My own experience, too, which led me to introduce the 'silence-lesson', proves this attitude of obedience which in this case was a phenomenon of collective obedience. It proved a marvellous and unexpected correspondence by a whole group of children who almost identified themselves with me.

Once I came into a class that was already seriously at work; the children had already developed their will. I entered this class of forty-five children with a baby of four months in my arms. It was an old Italian custom to place a baby's legs together and wrap them tightly round and round with cloth so that the legs and feet were perforce quite still and fixed. Showing the baby to the children I said: "I have brought you a visitor; see how still he is; I am sure you could not keep so still". I meant it as a joke and thought they would laugh, but all became serious and put their legs and feet together and were still without movement. I thought they had not understood my joke so I said: "If only you could feel how gently he breathes; you could not breathe as gently as that because your chests are bigger". Now, I thought, they will laugh, but no, they remained with their feet together and also controlling their breath so that it

should make no noise and they looked seriously at me. I then said : " I will walk out very quietly, but the baby will be quieter than I ; he will not move or make any noise ". I took the child back to its mother and came back ; they were still there motionless and with a look on their faces as if to say : " See you made a little noise but we are as quiet as that baby ". So all the children had the same will, all were urged to do the same thing, and the result was a class of forty-five children perfectly immobile and silent. People would have thought, " what a wonderful discipline," and would have wondered how it was obtained. How ?—by an attempt to make the children laugh ! The result was a silence which was very striking, so much so that I said " What a silence ! " and the children seemed to understand and feel the silence and remained quite still, controlling their breath, and I began to hear sounds that I had not heard before, the ticking of the clock, the drip from a leaking tap outside, the buzzing of flies. Adults generally do not know this silence ; even in church they get up and kneel down and move about, put coins in the collection-box, etc. etc. ; so their idea of silence is very superficial. This silence was a cause of great joy to the children, and the silence lesson which is a feature of our schools now, developed from this experience.

From this exercise of silence could be measured the strength of will of these children, and with the exercise the strength of this will became greater and greater and

the period of silence lengthened. So we added to this the whispering of the name of each child, and as each heard his name he came quietly while the others remained immobile, and, since each child came carefully and slowly so as not to make a noise, how long the last child to be called had to wait! They therefore had developed to a great degree their strength of will. When we say we must teach children to inhibit this or that, we must remember that children are capable of much greater inhibition than we are capable of, and after all will and inhibition give obedience. Inhibition of impulses is one of the great results of this exercise as well as the control of one's actions. Hence it came to be a part of our method: on one side, the will to choose and be freely active, and on the other side inhibition. The children thus developed into people of great will; in that environment they could do what they willed—act or refrain from action, and they formed a group wonderful to see.

To have absolute silence we must all agree; if one person does not agree, the silence is broken; therefore a consciousness comes that we must act together and produce a result. Thus a conscious social relationship comes about.

I had unintentionally stimulated this first silence by bringing the baby into the room, but I could not always depend on that, so how was I to arouse this interest again? I found the best way was by saying simply: "Would you like to make silence?" Immediately there

was great enthusiasm and I found to my surprise that I could command silence and the children obeyed me. The adult gave a command which all obeyed. Obedience had developed in the children, because all the elements were there. I merely said something and they obeyed ; so in developing the will, unseen and unexpected obedience had come.

Obedience is the last phase of the development of the will, so the development of the will makes obedience possible. With our children it leads to a phase when the teacher, whatever he commands, is promptly obeyed. What he then feels is that he should be careful not to take advantage of this type of obedience of the children. He becomes aware of the real nature of the character which a leader should have. A leader should feel a great responsibility for the orders he issues. A leader, therefore, is not somebody with a sense of great authority, but somebody with a sense of great responsibility.

CHAPTER XXVII

THE MONTESSORI TEACHER

FROM all that we have mentioned it may be understood that a Montessori teacher has to be quite different from a teacher in an ordinary school, and one must be careful not to consider this too superficially, because there are certain Montessori teachers who take things too literally. They say: "The children must be active and the teacher must not interfere", so they abandon the children and they do nothing.

In the presentation of the means of development the teacher has a very active task; also the fashion in which they must be presented and their details indicate a very active teacher; therefore, the part the teacher plays is a complex one. It is not that the Montessori teacher is inactive and the teacher of the ordinary school active, but all the activities our teacher has to perform are a preparation, a guidance, and the subsequent "inactivity" of the teacher is a sign of success. Complete outer inactivity of the teacher represents a task successfully accomplished, we might say it is an ideal

aim, and blessed are the teachers who have brought their class to the stage where they can say : " Whether I am present or not, the class functions." Each child through his activity has achieved independence and now the group has achieved independence. That is the mark of success, but to arrive at this there is a path to follow ; the teacher too must develop.

One thing we must have clearly before our eyes, *i.e.*, that the Montessori teacher and the ordinary teacher are on different levels. One cannot transform an ordinary teacher into a Montessori teacher ; one must create anew. To begin with, we might say that the first step for the teacher is self-preparation. She has to prepare her imagination, because in the ordinary school the teacher knows what her children are like as far as their immediate behaviour shows and she knows she has to care for them and bring them up, whereas the Montessori teacher sees a child who is not there yet, materially speaking. This is the main difference. Our teachers are on a superior level, not on the material level. Teachers who come to our schools must have a sort of faith in *the child who will reveal himself* through work. The teacher becomes detached from any idea regarding the level on which the children may be. The different types of children, who are all deviated, do not affect her, she sees a different type of child who lives in a spiritual field. The teacher has faith that the children she has actually before her will show their real self when they find any work

which attracts them. What does she look for ? What is her expectation ? To wait till one or two of the children become concentrated.

On the path of the teacher's own spiritual evolution in this work there are three stages :

First Stage. The teacher becomes the guardian and custodian of the environment ; she therefore concentrates on the environment instead of being caught up by all these deviated children. She concentrates on the environment because from there the cure will come. The environment holds the attraction that will polarize the will of the children. As in our countries where each bride has her own home and makes it as attractive as possible for herself and her husband, instead of paying over-much attention to her husband she pays attention first to the house in order to make it into an environment in which a normal and constructive relationship can be formed. She tries to make it a peaceful, comfortable house, full of interesting stimuli. In such a house, the essential part is cleanliness and order : everything in its place, clean, shining and bright. This is the first care of the wife. In the school also the first care of the teacher should be this : order and care of the material so that it be always beautiful, shining and in repair and nothing missing, so that everything looks new to the children and is complete and ready for use at any time. This also means that the person of the teacher must be attractive. She should be young, beautiful, with flowers in her hair, scented

with cleanliness, happy and full of dignity. This is the ideal. Everyone can translate it as they like, but we must remember that when we present ourselves in front of children, we must realize they are *great people.* The appearance of the teacher is the first step to real understanding and real respect for the children. She should study her movements and make them as gentle and graceful as possible. The child of this age has a great ideal of his mother ; we don't know of what type the mother is, but very often we hear a child say when he sees a beautiful lady : " How beautiful she is, just like my mother ! " Actually the mother may not be so beautiful at all, but to the child she is and everyone whom he admires is " as beautiful as my mother ". So this care for one's appearance ought also to form part of the order in the environment of the child ; the most living part of the environment is the teacher.

This care of the environment then, is the first work of the teacher and must precede everything else ; it is an indirect work. Unless it is completely attended to, there will never be any worthwhile and continuous results in any other field—physical, mental or spiritual.

Second Stage. Now we come to the children, having first ordered the environment. What to do with these children still disorderly with these aimlessly wandering minds which we wish to attract in order to fix them on work ? I sometimes use a term which is not always appreciated : the teacher must be seductive, she must

seduce the children at this stage. Imagine a child entering a black dirty environment with a dirty teacher and being given an object to which he is supposed to be attracted ! Surely the teacher must be attractive first, in appearance and in manner. In this respect our teachers and the teachers in ordinary schools may be alike, but this is all before the period of concentration.

Before concentration sets in the teacher can do what she likes more or less, because she upsets nothing important. She can intervene in the children's activities if necessary. I have read of a Saint who tried to attract the abandoned boys of the streets of a town who were learning bad habits. What did he do ? He tried every means to amuse them. That is what the teacher must do at this stage. The use of poetry, rhymes, singing, stories, drama, clowning ; anything is good enough except the stick. The teacher who fascinates the children attracts them and this leads to some exercise, which is not very important but it *does* attract them. A vivacious teacher can attract more easily, then why not make use of it ? To say brightly : " Now what about changing the furniture today " and then work with them, the teacher herself carrying things carefully and suggesting how to carry, doing all this brightly. Or : " How about polishing this beautiful brass bowl ? " or : " Shall we go into the garden and collect some flowers ? " If the teacher is attractive the action will be attractive.

This is the second period in the development of the teacher. If there is some child who persists in molesting others at this stage, the practical thing is to interrupt his actions. Whilst we have said so often that when a child is concentrated in work *one must not*, under any circumstances, intervene and interrupt his cycle of activity, and so prevent his full expression, obviously here the contrary is the right technique : to interrupt and so to break his thread of disturbing activities. The interruption can be an exclamation merely, or it can be getting interested in him ; multiplying your attention to him is like a lot of electric shocks to him and will bring a reaction in time. If a child is bothering others, one might say : " How are you, Johnnie ? Come here, I want to give you something to do ! " Probably he will not want to do that, so you say : " So you don't want to do that ? All right, let's go into the garden then," and go with him or let your helper take him and then his naughtiness comes under your care and the children are not troubled.

Third Stage. Now comes the third stage when the children are interested in something, usually some exercise of practical life, because one cannot give any other material until one has been able to present it properly and that we cannot do while they are not concentrated on anything. When the child becomes interested in an object, the teacher must *not* interrupt, because this activity obeys natural laws and has a cycle ; and if it is touched, it disappears like a soap-bubble and all its

beauty with it. The teacher must be very careful now, non-interference *means* non-interference, in any form. Often mistakes are made by teachers here. A child who has been a nuisance, at last does a piece of concentrated work; the teacher passes and sees him and says: "Good!"—that is enough, the damage is done. The child will probably not look at work for another two or three weeks. Also if a child has a difficulty and the teacher interferes to show how to deal with it, the child will leave the teacher with the work and go away. The interest of the child was not in the mere task, but in *conquering that difficulty.* "If the teacher is going to conquer it instead, well let her, my interest is gone." Also if the child is lifting heavy things, the teacher will go to help and frequently the child will then just dump the things and walk off. Praise, help or even noticing a child are often sufficient interruption to destroy activity. Indeed, even the child's seeing one looking at him will do it. After all if we are concentrated in something and someone comes and looks over our shoulder or looks at us from somewhere nearby, our concentration disappears. The great principle which leads to the success of the teacher is this: as soon as concentration appears, pay no attention, as if the child did not exist. We can note what he does in a single glance, without paying any attention that makes him aware of us. Now the child will begin to choose his own actions. This may cause problems in a class where more than one may want the same material.

In the solution of these problems also, we must not interfere unless we are asked ; the children will solve them. Our duty is only to present new objects when the child exhausts the activities possible with the old ones.

This ability of the teacher to refrain from interfering comes with practice, just as all the other abilities. She must act as if she were there to serve the children ; if she wants a good example, she can study a good servant. He prepares everything that pleases his master, but he does not tell him what to do. He keeps the master's hair-brushes in order, but he does not tell him when he must tidy his hair ; he prepares his food carefully, but he does not order him to eat. He presents it well and with exactness and unobtrusiveness and then disappears. So must we act to this master of ours—the growing spirit of the child. This is the master we serve, the child-spirit. When he shows a wish, we are ready to satisfy it. The servant does not intrude on the master if he is alone, but when the master calls, the servant is immediately there to do what he wants and he answers : " Yes, sir ". He admires if asked to do so and says : " How beautiful " if that is expected of him, even if he does not see any beauty himself. So with the child who has done some concentrated work. We must not intrude, but if he shows us what he has accomplished and wants our approbation, we give it generously.

This is the plan and the technique : to serve, and serve well ; to serve the spirit. This is something new,

especially in the realm of education. It is true we would all like to serve children, but does the ordinary teacher know how to serve or what to do? She will see he is dirty and she will wash him ; that his clothes are in disorder and she will dress him. This is the idea of the ordinary teacher, *viz.*, that if one is to serve children, one must do everything for them, wash, dress and feed them. But we are not this type of teacher ; we are not servants of the body. We know that if a child is to develop, he must do these things himself. The basis of our teaching is that the child shall *not* be served in this sense. The child must acquire physical independence by being sufficient unto himself. Independence of will by choosing alone and freely, independence of thought by working alone and uninterrupted. The consciousness we have that development is a straight path to independence must give us the clue. We must help the child to act by himself, will for himself, think for himself. This is the art of the servant of the spirit, an art which can be expressed perfectly in the field of childhood. It is only then that we can see the development of those marvellous characteristics in children, that we have talked about.

These qualities of a social being are wonderful to behold, and the joy of the teacher is to be able to see the manifestations of the spirit of the child. It is a great privilege since usually they are hidden, and as they appear, the teacher who knew of them by the inspiration of her faith, welcomes them. Here is the child as he

should be : the worker who never tires, the calm child, the child who seeks the maximum effort and who tries to help the weak, who knows how to respect others and shows us characteristics which make us know him as the true child.

So the teacher gradually begins to say : "I know my children " and by saying that she says : " I have seen the reality of these facts. I have seen the child as he should be, a child even superior to what I had supposed." This is to have knowledge of childhood. The ordinary teacher may say : " I know my children ; this is Johnnie, his father is a carpenter, his mother is a very clever manager in the home." " I have been to this little girl's home ; I have eaten with her family ", etc. " I have given much time and thought to them ; I know them." But with our teachers it is not these superficial facts that they know, but the *secret of childhood.* They have penetrated into this secret and have a knowledge far superior to ordinary knowledge, just as their love and care was far superior to that of the ordinary teacher. The Montessori teacher has a deep love because she loves the deep knowledge of the secret of the children. Perhaps for the first time one understands what love really is on these occasions when the child manifests his spirit. " They are very touching, they touch me so deeply that they change me as does any love worthy of the name. I have been so touched that I cannot help talking about it. And what have I loved ? These manifestations of the human

spirit. It is these revelations, this spirit which has transformed me. It is possibly the highest form of love, for I may not remember the child's name, but the manifestation of the human spirit has deeply moved me, I am in love with it."

Ordinary teachers say that they love their pupils : " When they pass me, I rub their hair or I kiss them. I enquire after them when they are ill ". But this is personal love, only. So there are two different levels. One is material, and on this the whole conception of the old education is founded. Children are material beings ; if you think of spiritual things in connection with children, you think of the prayers or rituals you can teach them. But our level is spiritual, our love not material. The children have brought us to it ; so when the teacher says she knows her children she refers to something superior which the children have revealed. And when she says : " I serve my children ", she means : " I serve the spirit of man which must liberate itself. I know them,—*i.e.* I know the spirit of man."

This difference of level has really been brought about not by the teacher, but by the children. It is the teacher who finds herself brought up to this level which she did not know existed. The child has made the teacher grow up to his level ; now she is there and she is happy. Her happiness before was perhaps to have as little to do as possible and to draw as high a salary as possible—and what other satisfaction ? Perhaps her authority over the

children and her feeling that she is the ideal which the children follow and whom they obey. She may be satisfied by a sense of power and vanity. Perhaps also she thinks of going a step higher in her material career, to become a headmistress or inspector. But there is no real happiness in this. The spiritual happiness that one may derive from the spiritual manifestations of the children, these teachers have never felt; yet to have this one would be ready to leave the lesser happiness. How many headmasters and teachers in high schools have resigned their posts and salaries and gone to little children, to find this joy? I do know of two doctors of medicine in Paris who left their profession to do this work in order to see for themselves these phenomena, and they found that what they actually did was to pass from a lower level to a higher one.

What is the greatest height of a Montessori teacher's success? To be able to say: "Now the children work as if I did not exist". She has become nothing and the children have become all. The ordinary teacher may say: "I have brought my children up to this level; I have taught this; I have developed their intellectual powers; I have . . . . I have . . . ." But what have *they* done? Nothing. They have not developed; they have imposed themselves and crushed and impeded. This is the crime of the schools, especially at the period of development before six years. All we should be able to say is: "I have helped this life to achieve its creation"

and that is real satisfaction. The Montessori teacher of children up to six years knows she has helped humanity in an essential period of development. She may not know anything of the material facts of the children, though actually some she will be bound to know because the children will talk to her freely. She need not mind what happens afterwards to these children, whether they go to secondary schools and colleges or cease their schooling earlier ; she is satisfied to know that in this formative period they have achieved what they had to achieve. She says : " I have served the spirit of these children so that they have achieved development and I have accompanied them in all their experiences ". She does not care what the ordinary inspector says, it is of no importance, it is a ridiculous remnant of old times. The teacher who has to wait on inspectors' reports is a person in a miserable position and out of the reality of spiritual life, even if she prays five times a day. Spiritual life is perpetual life from one morning to the next morning. It is to live on a spiritual level, not merely to say prayers.

The ordinary teacher says : " How humble these teachers seem, they are not interested even in their own authority " and some say : " How can your method succeed, when you pretend that these teachers renounce all the usual things ? " But they have not renounced ; they have simply entered another life where the values are different ; where there are the real values of life unknown to the former life. All the principles are different, take the

principle of justice. In the old schools justice was important. "The teacher has power, dignity and justice," it used to be said. What was this justice ? Treating all alike : "I don't mind if the children are rich or poor ; if punishment is necessary, all are punished". If any child made mistakes he got a zero for his work, in some cases even if he was deaf ; all had to be treated alike. Human society is based on this 'justice'. Even in democratic countries justice frequently only means that there is one law for all—the rich and powerful and the starving man. Justice is usually connected with trials, prisons, sentences. The Law Courts are called the Palace of Justice, and to say : "I am an honest man" means I have had nothing to do with justice (*i.e.*, the police and the law courts.) In schools also the teacher is careful not to caress a child because if so she must caress all—she must be just. This is a justice which levels all down to the lowest level ; as if, spiritually, we cut off the heads of the taller ones to bring them to the same level as the others.

On the higher level of educational work, justice is really spiritual, it seeks that every child achieve the maximum of its individual abilities. Justice is to give to any human being all help that will enable him to reach his full spiritual stature, and those who serve the spirit in all ages, must give help to these energies. This will perhaps be the organization of the future society. So-called justice at present is ridiculous, it is the freedom where one man has no chance and others have all the

chances and take no advantage of them. Nothing need be lost of these spiritual treasures and compared to them economic treasures lose their value. Whether I am rich or poor does not matter if I can reach full expression, the economic problem will then adjust itself. When humanity can achieve its spiritual self to the full. it will be more productive ; and economic things will lose their exclusive value. Men do not produce with their feet or their bodies, but with their spirit and intelligence. All insoluble problems will be solved.

The children develop an ordered society unaided. We adults need police, lathis, soldiers, machine-guns. The children solve their own problems in peace. They have shown us that freedom and discipline are the two sides of the same coin, because scientific freedom leads to discipline. Usually coins have two sides, one beautifully engraved with a face or figure, the other flatter and with lettering. The flat side is freedom and the beautifully engraved side discipline. This is so true that when we find a class of undisciplined children this serves as a control of error for the teacher, for she says on seeing it : " I have made a mistake against this class somewhere " and so she corrects it. The ordinary teacher thinks this is a humiliation ; it is not. It is a technique of the new education. In serving the children, we serve life. By helping nature we go to the next level of super-nature, since a law of nature is to go higher continuously. And it is the children who have built this beautiful structure to

another level. The laws of nature are order, so when order comes spontaneously we know we have reached the cosmic order. One of the missions of children is to draw adult humanity to a higher level. I cannot develop this point here, important as it is, but it is a fact. The children draw us to a spiritual level and solve the problems of the material level. Let me quote some phrases which have helped us to keep in mind all these things we have mentioned. It is not a prayer, but a memorandum and so for Montessori teachers an invocation, a kind of syllabus, our only syllabus :

> "HELP US, O LORD, TO PENETRATE INTO THE SECRET OF THE CHILD SO THAT WE MAY KNOW HIM, LOVE HIM AND SERVE HIM, ACCORDING TO YOUR LAWS OF JUSTICE AND FOLLOWING YOUR DIVINE WILL."

CHAPTER XXVIII

THE FOUNTAIN SOURCE OF LOVE— THE CHILD

In our Courses we always see a gathering of workers that are typically Montessorian. There are babies, young people, older people, professional people, non-professional people, cultured and illiterate people and there is no leader among us. Our Courses are apparently heterogeneous unlike most other courses of culture. Students following our courses have to have some degree of culture, but that is the only limit, within it we can have matriculates and professors side by side, lawyers and doctors, and those who would be their patients. In Europe we used to have people from all countries and in America we once had an anarchist among us! With all these differences of people there have never been any conflicts between the students. How is this? It is because we have all been linked by a common ideal. In Belgium, such a small country that it might be fitted in one of the tips of India, there are nevertheless two languages: French and Flemish. The people are divided politically

as a result. Seldom has it been possible to draw all these people together in a conference, but in a Montessori Course it happened. It was so unusual, that in newspapers it was commented: "For many years we have been trying unsuccessfully to get these parties together, now we have it in this course to study the child." This is the power of the child: all are familiar with children, whatever their religious or political feeling, and all love children, hence the uniting influence of the child. Adults have formed some strong and ferocious convictions and these convictions divide them into groups. When they begin to speak of these convictions, their religious and political ideals, they begin to fight.

But on one point—the child—they all feel alike; that is why socially the child is so important. It is evident that this is a point from which one can start in order to put the world into harmony. It is one point on which all have a delicate sensitivity. When we speak of the child, all are touched, all feel love, all are sensitive. The whole of humanity is held by this deepest emotion which kindles friendly sentiments. It is a form of love. When one touches the child, one touches love. One does not know how to define this love; all feel it, but cannot describe it. We may say: "I feel this love; it exists, but its root and its vastness I do not know". Just as we are aware of things through our senses, so we have this feeling of love; we are impressed by it. We feel it is there, even though, when we consider

much in the life of the adult, it is as if we had forgotten it. When an adult thinks of another adult, usually forces of defence arise, but when we think of the child the strong and hard accretions soften and disappear, we become sweet and gentle because now we are dealing with the basis of life. This is so not only for humans, but for all living beings. It comes when the young appear. There are then these two aspects of adult life : that of defence and that of love, but the fundamental one is that of love as one feels it for the child, because without the child the adult would not exist.

Let us try to understand this love more consciously. Let us consider what prophets and poets have said about it, for they have been able to give form and expression to this great energy which we call love. Certainly there is nothing more beautiful or uplifting than the words of poets who have given this form to love so that man can visualize it to some extent ; this love which is the energy at the base of all existence. Even the most ferocious of men when they read these statements of poets and religious men may say : " How beautiful ! " That means that this love has remained in them and keeps vibrating in them, despite the manner of their life. Were it not so, they would call such things, nonsense, stupidity, vapidity and so on. Although it does not seem to have entered their lives, yet they are influenced by it. It means that they are thirsty for love even without their knowing it.

It is curious that even in times such as these when war is most destructive and has reached all the corners of the world, when one would think that to talk of love would be most ironic, people *do* talk of it. They are planning for unity, which is love. This means that it is a basic force. So now, at this time, when it would seem that everything might lead men to say : " Away with this thing called love ; let us have reality which has been proved to be destruction, for are not cities, forests, women, children, animals all destroyed ? ", still there is talk of reconstruction and love ; even *while* they destroy, people talk of it. If we look and listen to all around us, the wireless, newspapers, common talk, we hear the Pope, Truman, Churchill, the directors of the churches, those against the churches, the cultured and the illiterate, the rich and the poor and all the followers of all the " isms " and theologies, all saying " love ". And if this is so, (and there could be no stronger proof than there is to day of the force and impressiveness of this love) then why should not humanity study this great fact of love ? Why should it be only spoken of when hate is raging ? Why should it not be studied and analysed always, so that its energy can be made use of ? And why not see why this energy has not been studied before so that it could be used to combine the other forces of which we know ? Man has put so much of his mental energies into the study of other natural facts. In those fields he has worked laboriously and long and discovered many things. Why not

put a little of this energy into the study of this force which should unite humanity ? I feel that all contributions that give an illustration of love should be taken in with energy and avidity and great prominence should be given to them. I mentioned that poets and prophets have spoken of it, often as if it were an ideal ; but it is real, it has always been there and is eternal.

We must realize too that if we feel this reality of love at the present time, it is not because we were taught it in school. Even if we were taught the beautiful descriptions of love, the words were few and they would have disappeared, the memory of them would have vanished in the multitudinous events that have followed since then. When people appeal with so much energy for love, it is not because they heard of it in their youth or read of it in poetry or in religion ; it is the expression of something not learnt by heart, but of something given to us as part of the great heritage of our life. It is Life which speaks, not poets and prophets. Love can be considered from another side, besides that of religion and poetry. It is from the point of view of Life itself that we must consider it ; then love is not merely the fruit of imagination or aspiration, but a reality which is an eternal energy and cannot be extinguished.

I would like to say a few words about this reality and about those things which the poets and prophets have said also. This energy we call love is the greatest cosmic energy. Even when we use such terms we still

speak of it disparagingly, because it is more than an energy—it is creation itself and is better expressed in the phrase " God is Love."

Now to come to more concrete things. I would like to be able to quote from all poets and prophets, but I do not know them nor do I know their language. But I know all have wonderful verses. Let me quote from one I know who showed great vehemence in his expression when speaking of love. It is the best-known of all religious or poetic descriptions in Christendom, and says :

" If I speak with the tongues of men, and of angels, and have not charity, I am become a sounding brass or a tinkling cymbal. And if I should have prophecy. and should know all mysteries, and all knowledge, and if I should have all faith, so that I could remove mountains, and have not charity, I am nothing. And if I should distribute all my goods to feed the poor, and if I should deliver my body to be burned, and have not charity, it profiteth me nothing." (St. Paul in I. Cor. XIII)

We could say to such a person : " You must know what love is since you feel it so strongly, it must be something formidable, tell us about it in detail." But when the description of this mighty sentiment is given, it is so simple. The illustrations he has used might be found in our present civilization which can move mountains and work even greater miracles than that, for we can speak in a whisper from one corner of a continent to a corner in another continent where we are heard. But all this is

nothing, if there is not love. We also have organized great institutions to feed the poor and clothe them, but if we have not love it is like playing a drum which gives sound because it is empty. What then is this love? St. Paul who gave us a description of its lofty grandeur, as quoted above, continues, but he does not furnish a philosophical theory, he writes :

"Charity is patient, is kind : charity envieth not, dealeth not perversely : is not puffed up. Is not ambitious, seeketh not her own, is not provoked to anger, thinketh no evil. Rejoiceth not in iniquity, but rejoiceth with the truth : beareth all things, believeth all things, hopeth all things, endureth all things."

It is a long enumeration of facts, a long description of features, but all these features remind us strangely of the qualities of children. They seem to describe the powers of the absorbent mind. The absorbent mind receives all, it does not judge, it never repels, it does not react. It absorbs all and incarnates it in man. The child achieves incarnation in order to adapt himself to life with other men and become equal to them. The child suffers all : if he comes into the world in a cold and frozen environment there he forms himself to live in it and the adult he will be one day will only be happy in that environment. If he enters the world in a torrid region, there he will construct himself so that he could not live and be happy in another climate. Be it the desert which receives him, be it the plains fringing the ocean, be it the

slopes in the high mountain ranges, he enjoys it all and there alone he reaches the highest well-being.

The absorbent mind believes all, hopes all. It receives poverty as it receives wealth, it receives all faiths as it receives the prejudices and customs of his environment : it incarnates it all within itself.

This is the child !

And if it were not like this, mankind would not reach stability in any of the most different parts of the world, it would not achieve its continuous progress in civilization without ever having to start afresh.

The absorbent mind forms the basis of the miraculous society created by man and appears to us in the guise of the small and delicate child who solves the mysterious difficulties of human destiny by the virtues of love.

If therefore we study the child a little better than we have done hitherto, we find love in all its aspects and analysed. It is not analysed by the poet or the prophet but by what the child shows—by reality. If we consider the description given by St. Paul and then look at the child, we say, " Here it is that all these are found ; so here is the great treasure itself."

The treasure then is to be found not merely near those who study poetry and religion, but within every human being. This miracle is sent to all ; the representative of this tremendous force is to be found everywhere. Man makes a desert of strife and God continues to send this rain. So it is easy to understand that all the

creations of adults, great achievements as they are, without love lead nowhere, to nothing. But if this love present in the child is taken among us, if its values and potentialities are realized and developed, our achievements, already great, will be tremendous. The adult and the child must come together ; the adult must be humble and learn from the child to be great. It is curious that among all the miracles which humanity has performed, there is only one miracle that he has not taken into consideration : the miracle that God has sent from the beginning : the Child.

Supposing we put a little levity into this weighty subject and tell a little story. A certain young man wished to marry and recounted all the praises of the lady of his choice. An elder guide responded in writing and this is what happened : The young man praises her beauty ; the guide writes a zero. The young man finding beauty is not enough, states that she is rich ; the guide writes zero.

The young man says, she is learned, but the guide again writes zero. The young man says : " All this means nothing, well, she is athletic, she rides, swime, plays tennis." Again the guide writes zero. The young man goes on describing all sorts of qualities which his lady-love possesses and the guide continues to write zero against them. Then the young man says : " She is of good character ", and the guide says : " That is something ", and writes a figure one in front of all the zeros.

All the other merits acquire their value from this one quality and with that one in front of all the zeros her total value increases a thousandfold. So it is with civilization, all the achievements are naught and lead to destruction, but if love is there they all acquire a great value.

This teaching of the child as a power of love is not as the teaching of St. Paul, it is not an understanding of love with the mind. It is not that man has taught this love to children. Since he is not even capable of describing it, how can he teach it ? It is a force of nature and is in the child. It means that there is this force that nature has placed in the very constitution of man, it is therefore more important than anything else and must be put before all the creations of man. This brings us to another field, to that of love not as a phantasy of man, but as a force in Natura Creatrix. Let us analyse the forms and aspects that this love can assume.

That which we call love we have in our consciousness. It is the part of the universal energy that we feel consciously. But one may say that universal energy has nothing to do with humanity. Let us analyse it : it is an attraction, and what is attraction but a universal force. Let us consider the universe. What keeps the stars where they are and makes them move along the fixed path they follow ? Attraction. Why do bodies fall to the ground ? By attraction. What is it that works among the atoms of matter so that they construct wholes ? Attraction. If this attraction did not exist there would

be chaos, nothing would be in existence. There would be no heaven and no stars without attraction. And if there were no attraction to the earth, when we jump we would remain up in the air and so would everything else ! Chemical affinity which brings certain elements together could not manifest itself without attraction. And attraction is love. So we could say with St. Paul, " If I made the stars and everything on earth, but I had no love or attraction, nothing would exist." Love is not merely sympathy, but the very essence of existence.

If we consider conscious love, we can analyse further. All animals have at certain moments the instinct of reproduction, which is a form of love. This form of love is a command of nature because without this attraction nothing would continue. So a little atom of this universal energy is lent to them for a little moment in order that the species may be continued. They feel it for a moment and then it disappears. This shows how measured and economical nature is in lending love ; just sufficiently and no more, given in small doses and based on command. When the young come, the parents feel a special love for them which leads them to protect the species, and all the young ones are kept near the mother. But as soon as the young are sufficiently grown, love disappears suddenly from one moment to another. It is not a sentiment as we think, but an energy given very carefully and economically, just a small ray to penetrate the darkness of consciousness,

but as soon as the work is done, it disappears. So, love can take this aspect and then what does it convey to us? That this supposed sentiment is not merely a sentiment. It is true that it lasts longer in man than in animals, but it is not a sentiment really (apart from its encouragement or discouragement). Cosmically it is an energy lent to every living being and withdrawn as soon as the immediate purpose is fulfilled.

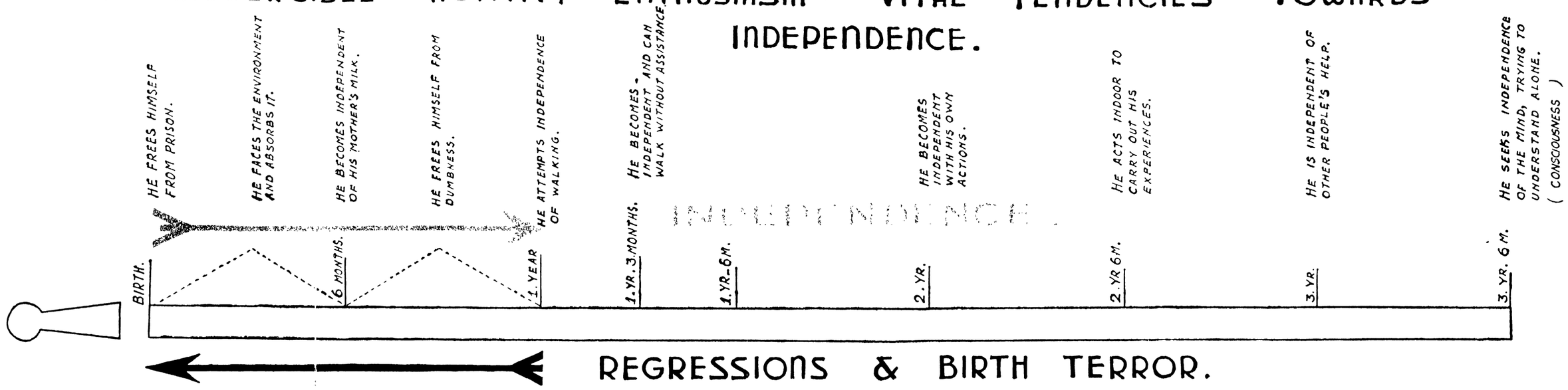
So this force is given within measured limits to man also, but even so it is greater than any other force, because it carries him to social organization. It must be treasured and developed and expanded to the maximum. Man can sublimate this force lent to him and make it vaster and vaster to reach abstraction. To bring it into the field of abstraction and to treasure it, this is the work of man. Let us take it and bring it into the field of imagination and make it general. Let us treasure it because this is the force that holds the universe together. This part, that we possess consciously, is given to us, and if this force is renewed in man every time a child is born, it must be treasured. By this force man can hold together all things that he can do with his hand and his intelligence.

Love is a gift of the Universal Consciousness for a special aim and purpose, as is everything lent to man by the Cosmic Consciousness. If the aim is not fulfilled, then nothing can sustain itself and all crumbles away. We can understand the words of

the saint that all is nothing unless love is there. More than electricity which gives light in the darkness, more than the etheric waves which allow our voices to travel over wide distances, more than any energy that man has discovered and exploited is this love ; above all things it is the most important. All that man can do with the forces of electricity or of etheric waves depends on the consciousness of him who uses them. This energy of love is given to us so that each one of us contains it when a child comes and it opens out as a fan. Even if later circumstances destroy it, we feel a yearning for it. So we must study it and use it more than any other force in the environment, because it is not lent to the environment as other forces are, but it is lent to us. The study of love and its utilization will lead us to the fountain whence it springs and that is the Child. This is the new path that man must follow.

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JOY INCOERCIBLE ACTIVITY ENTHUSIASM — VITAL TENDENCIES TOWARDS INDEPENDENCE.



REGRESSIONS & BIRTH TERROR.

RETARDATION OF ALL THE NATURAL MATERIAL FORMS OF INDEPENDENCE (WALKING SPEAKING ETC.)
HE TAKES REFUGE IN SLEEP — HE IS FRIGHTENED ON AWAKENING — OFTEN HAS NIGHTMARES.
AVOIDS ENVIRONMENT (SEEKS REFUGE AT HOME, NEAR HIS RELATIONS, ESPECIALLY HIS MOTHER — SEEKS CONTINUOUS COMPANY —
SEEKS FOR PROTECTION — HE FEARS THAT HIS MOTHER WILL LEAVE HIM — ANXIOUS ATTACHMENT —
HE WANTS OTHERS TO ACT FOR HIM — HE WANTS TO BE CARRIED — TO BE DRAGGED ALONG.
HE WANTS TO BE FED.
SUPERFICIAL RESPIRATION.
WEEPING, WHINING, MELANCHOLY — LAZINESS — INERTIA — FEAR — BOREDOM.

CURE : ATTRACTION OF THE ENVIRONMENT — INTERESTING ACTIVITY ACCORDING TO THE DEGREE OF NATURAL PSYCHIC DEVELOPMENT
SOCIETY OF OTHER CHILDREN.
ENVIRONMENT MUST OFFER THE LEAST RESISTANCE.

DEVELOPMENT OF MOVEMENT.



1 2 3 4 5 **6** 7 8 9 10 11 **1** 1 2 3 4 5 **6** 7 8 9 10 11 **2** 1 2 3 4 5 **6**

ENORMOUS DEVELOPMENT OF THE BRAIN.

RAPID DEVELOPMENT OF THE CEREBELLUM

THE EQUILIBRIUM IS ACQUIRED IN FOUR STAGES.

CYCLES OF ACTIVITY.

EQUILIBRIUM

Control of the head

When placed on his face downwards he can lift his head and shoulders.

I

He can sit if helped.

He can sit by himself.

II

He can hold himself erect but walks on four limbs.

The movements of walking when held up are made on tip toe

III

He can walk if helped.

He places the foot flat on the ground

IV

He walks without help

MAXIMUM EFFORT

He walks carrying heavy objects.

He catches hold of objects for climbing up.

He goes up the staircase.

Runs and Hangs on to objects with certainty

GYMNASTICS.

Takes Long walks.

HAND

1 2 3 4 5 **6** 7 8 9 10 11 **1** 1 2 3 4 5 **6** 7 8 9 10 11 **2** 1 2 3 4 5 **6**

FIRST TO BE ALIVE

Physiological Adaptations

EVOLUTION OF PREHENSION

INSTINCTIVE PREHENSION

STUDY OF THE HAND

INTENTIONAL PREHENSION OF OBJECTS

EVOLUTION OF PREHENSION DIRECTED TOWARDS AN AIM

(Work and exercise) {Discrimination in wish}

PREHENSION GUIDED BY THE WISH. (CHOICE.)

FIRST ACTIVITY OF THE HAND TOWARDS WORK

STRENGTH

THE ARMS SUSTAIN HEAVY OBJECTS

THEY HELP WITH PREHENSION THE CHILD TO CLIMB

EXPRESSIONS OF MAXIMUM EFFORTS

CO-ORDINATION BY MEANS OF EXPERIENCES.

EXERCISES WITH THE HAND

WORK LEADING TO INDEPENDENCE

CHANGE OBJECTS FROM PLACE WITH A PURPOSE

TO CLEAN AND TO DUST OBJECTS

TO LAY A TABLE

WORK LEADING TO INDEPENDENCE

TO WASH DISHES

SURENESS IN CATCHING HOLD OF SUPPORTS AND OF CLIMBING.

IMITATIVE ACTIVITY.

"HELP ME TO DO IT BY MYSELF"

Fig. 12.