

The problem of the environment

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The subject of our lecture today is the problem of the role that environment plays in child development. With regard to the environment, matters stand exactly the same as when we discussed the problem of heredity. We could see that paedology approaches heredity from its own special point of view and is not interested in the laws of heredity as such, but in the role heredity plays in child development. Paedology does not study the environment as such. This is the subject of other sciences. For example, among other disciplines, which may be considered as being closest to paedology, one could name hygiene, a field of study which investigates the environment primarily from the point of view of its relationship to disease and health care.

In exactly the same way as when he studies heredity, a paedologist investigates not just the environment and the laws governing its framework, but the role, meaning and influence of the environment on child development. It is for this reason that we must, as with the problem of heredity, first of all explain some of the basic laws and concepts which characterize the meaning or role of the environment in child development.

I would like to start with something which we have already discussed in passing, namely that for a proper understanding of the role which environment plays in child development it is always necessary, if one can put it this way, to approach environment not with an absolute but a relative yardstick. At the same time environment should not be regarded as a condition of development which purely objectively determines the development of a child by virtue of the fact that it contains certain qualities or features, but one should always approach environment from the point of view of the relationship which exists between the child and its environment at a given stage of his development. One can also put it in the form of a general rule which is now frequently met with in paedology and which says that one should give up absolute indicators reflecting the environment in favour of relative ones, i.e. the very same ones, but viewed in relation to the child.

There are two considerations which lead us to believe that we are justified in defending this idea, the first being that the role of any environmental factor varies among different age groups. To give an example: the speech of the people around him

can be absolutely identical when the child is six months old, 18 months old or when he is three and a half years old, i.e. the number of words which the child hears, the characteristic features of the speech from the point of view of how civilized it is, the size of the vocabulary, correct usage and grammar, the literary quality of the style, can all remain the same, but it is clear to anyone that this factor, which has not itself undergone any change at all during the course of development, takes on a different meaning depending on whether the child understands speech, or does not yet understand it at all, or is in the intermediate stage when he is just beginning to understand it. This means that we can only explain the role of the environment in child development when we know the relation between the child and his environment.

First of all, *a child's environment in the direct sense of this word keeps changing at every age*. Some authors maintain that a child's development consists precisely of such a gradual broadening of his environment. Before he is born, a child's environment consists of his mother's uterus, and soon after being born, his immediate environment continues to be limited to a very circumscribed space. It is well known that the world removed at any distance does not really exist for the newborn. For the newborn, only the world which immediately relates to him exists, i.e. a world limited to a narrow space linked with phenomena connected with his body and the objects around him. Then, gradually, a slightly wider range of the world around him begins to develop for the child, but to start with, this world is also very small, a world which includes the room, the backyard nearby and the street where he lives. As he begins to walk about, his environment expands and ever new relationships are formed between the child and the people surrounding him. And further, his environment changes according to the different kinds of environment each stage of his education provides: during his nursery school age, the nursery school; during his immediate pre-school years, the kindergarten; and during school age, the school. Every age presents the child with an environment which has been organized in a special way, so that the environment, in the purely external sense of the word, keeps changing as the child passes on from one age to another.

But there is a lot more to this. Even when the environment remains little changed, the very fact *that the child changes in the process of development*, results in a situation where the role and meaning of these environmental factors, which seemingly have remained unchanged, in actual fact do undergo a change, and the same environmental factors which may have one meaning and play a certain role during a given age, two years on begin to have a different meaning and to play a different role because the child has changed; in other words, the child's relation to these particular environmental factors has altered.

The case histories of children we have studied, have put us in a better position to be more exact and precise, and to say that the essential factors which explain the influence of environment on the psychological development of children, and on the development of their conscious personalities, are made up of their emotional experiences [*perezhivanija*].¹ The emotional experience [*perezhivanie*] arising from any situation or from any aspect of his environment, determines what kind of influence this

situation or this environment will have on the child. Therefore, it is not any of the factors in themselves (if taken without reference to the child) which determines how they will influence the future course of his development, but the same factors refracted through the prism of the child's emotional experience [*perezhivanie*]. Let us now examine one such straightforward case from our clinic.

We are dealing with three children, brought to us from one family. The external situation in this family is the same for all three children. The essential circumstances were very straightforward. The mother drinks and, as a result, apparently suffers from several nervous and psychological disorders. The children find themselves in a very difficult situation. When drunk, and during these breakdowns, the mother had once attempted to throw one of the children out of the window and she regularly beat them or threw them to the floor. In a word, the children are living in conditions of dread and fear due to these circumstances.

The three children are brought to our clinic, but each one of them presents a completely different picture of disrupted development, caused by the same situation. The same circumstances result in an entirely different picture for the three children.

As far as the youngest of these children is concerned, what we find is the commonly encountered picture in such cases among the younger age group. He reacts to the situation by developing a number of neurotic symptoms, i.e. symptoms of a defensive nature. He is simply overwhelmed by the horror of what is happening to him. As a result, he develops attacks of terror, enuresis and he develops a stammer, sometimes being unable to speak at all as he loses his voice. In other words, the child's reaction amounts to a state of complete depression and helplessness in the face of this situation.

The second child is developing an extremely agonizing condition, what is called a state of inner conflict, which is a condition frequently found in certain cases when contrasting emotional attitudes towards the mother make their appearance, examples of which we have previously been able to observe among one of our children and which, you may remember, we have called an ambivalent attitude. On the one hand, from the child's point of view, the mother is an object of painful attachment, and on the other, she represents a source of all kinds of terrors and terrible emotional experiences [*perezhivaniya*] for the child. The German authors call this kind of emotional complex which the child is experiencing a *Mutter-Hexekomplex*, or 'a mother-witch complex', when love for the mother and terror of the witch coexist. The second child was brought to us with this kind of deeply pronounced conflict and a sharply colliding internal contradiction expressed in a simultaneously positive and negative attitude towards the mother, a terrible attachment to her and an equally terrible hate for her, combined with terribly contradictory behaviour. He asked to be sent home immediately, but expressed terror when the subject of his going home was brought up.

Finally, at first glance, the third and eldest child presented us with a completely unexpected picture. This child had a limited mental ability but, at the same time, showed signs of some precocious maturity, seriousness and solicitude. He already

understood the situation. He understood that their mother was ill and he pitied her. He could see that the younger children found themselves in danger when their mother was in one of her states of frenzy. And he had a special role. He must calm his mother down, make certain that she is prevented from harming the little ones and comfort them. Quite simply, he has become the senior member of the family, the only one whose duty it was to look after everyone else. As a result of this, the entire course of his development underwent a striking change. This was not a lively child with normal, lively, simple interests, appropriate to his age and exhibiting a lively level of activity. It was a child whose course of normal development was severely disrupted, a different type of child.

When such an example is taken into account, and any researcher's experience who investigates concrete material is full of such examples, one can easily see that the same environmental situation and the same environmental events can influence various people's development in different ways, depending at what age they happen to find them.

How can one explain why exactly the same environmental conditions exert three different types of influence on these three different children? It can be explained because each of the children has a different attitude to the situation. Or, as we might put it, each of the children experienced² the situation in a different way. One of them experienced it as an inexplicable, incomprehensible horror which has left him in a state of defencelessness. The second was experiencing it consciously, as a clash between his strong attachment, and his no less strong feeling of fear, hate and hostility. And the third child experienced it, to some extent, as far as it is possible for a 10–11 year old boy, as a misfortune which has befallen the family and which required him to put all other things aside, to try somehow to mitigate the misfortune and to help both the sick mother and the children. So it appears that, depending on the fact that the same situation had been experienced by the three children in three different ways, the influence which this situation exerted on their development also turns out to be different.

By citing this example, I only wished to clarify the idea that, unlike other disciplines, paedology does not investigate the environment as such without regard to the child, but instead looks at the role and influence of the environment on the course of development. It ought to always be capable of finding the particular prism through which the influence of the environment on the child is refracted, i.e. *it ought to be able to find the relationship which exists between the child and its environment, the child's emotional experience [perezzhivanie], in other words how a child becomes aware of, interprets, [and] emotionally relates to a certain event. This is such a prism which determines the role and influence of the environment on the development of, say, the child's character, his psychological development, etc.*

In connection with this example, I would like to turn your attention to one more factor. If you recall, when we were discussing the methods we employ in our science, I attempted to defend the idea that in science the analysis into elements ought to be replaced by analysis which reduces a complex unity, a complex whole, to its units. We

have said that, unlike elements, these units represent such products of analysis which do not lose any of the properties which are characteristic of the whole, but which manage to retain, in the most elementary form, the properties inherent in the whole.

Today, whilst basing myself on a concrete example of the theory about the environment, I would like to show you a few such units with which psychological research operates. One example of such a unit is the emotional experience [*perezhivanie*]. *An emotional experience [perezhivanie] is a unit where, on the one hand, in an indivisible state, the environment is represented, i.e. that which is being experienced – an emotional experience [perezhivanie] is always related to something which is found outside the person – and on the other hand, what is represented is how I, myself, am experiencing this, i.e., all the personal characteristics and all the environmental characteristics are represented in an emotional experience [perezhivanie]; everything selected from the environment and all the factors which are related to our personality and are selected from the personality, all the features of its character, its constitutional elements, which are related to the event in question. So, in an emotional experience [perezhivanie] we are always dealing with an indivisible unity of personal characteristics and situational characteristics, which are represented in the emotional experience [perezhivanie].* That is why from the methodological point of view it seems convenient to carry out an analysis when we study the role the environment plays in the development of a child, an analysis from the point of view of the child's emotional experiences [*perezhivaniya*] because, as I have already said, all the child's personal characteristics which took part in determining his attitudes to the given situation have been taken into account in his emotional experience [*perezhivanie*]. For example, do all of my own personal constitutional characteristic elements, of every type, participate fully and on an equal basis? Of course not. In one situation some of my constitutional characteristics play a primary role, but in another, different ones may play this primary role which may not even appear at all in the first case. It is not essential for us to know what the child's constitutional characteristics are like *per se*, but what is important for us to find out is which of these constitutional characteristics have played a decisive role in determining the child's relationship to a given situation. And in another situation, different constitutional characteristics may well have played a role.

In this way the emotional experience [*perezhivanie*] also helps us select those characteristics which played a role in determining the attitude to the given situation. Imagine I possess certain constitutional characteristics – clearly, I will experience this situation in one way, and if I possess different characteristics, it is equally clear that I will experience it in quite a different way. This is why people's constitutional characteristics are taken into account when differentiating between those who are excitable, sociable, lively and active and others who are more emotionally slack, inhibited and dull. It is therefore obvious, that if we have two people with two opposite types of constitutional characteristics, then one and the same event is likely to elicit a different emotional experience [*perezhivanie*] in each of them. Consequently, the constitutional characteristics of the person and generally the personal characteristics of children are, as it were, mobilized by a given emotional experience

[*perezhivanie*], are laid down, become crystallized within a given emotional experience [*perezhivanie*] but, at the same time, this experience does not just represent the aggregate of the child's personal characteristics which determine how the child experienced this particular event emotionally, but different events also elicit different emotional experiences [*perezhivaniya*] in the child. A drunken or mentally ill mother amounts to the same thing as a mentally ill nanny, but it does not mean the same as a drunken father or a drunken neighbour. Which means that the environment, which in this case was represented by a specific concrete situation, is also always represented in a given emotional experience [*perezhivanie*]. This is why we are justified in considering the emotional experience [*perezhivanie*] to be a unity of environmental and personal features. And it is precisely for this reason that the emotional experience [*perezhivanie*] is a concept which allows us to study the role and influence of environment on the psychological development of children in the analysis of the laws of development.

Let us take one more example, which should also help us clarify the concrete way in which paedology investigates the role environment plays in child development by studying the relationships which exist between a child and his environment.

I think that you will agree with me when I say that any event or situation in a child's environment will have a different effect on him depending on how far the child understands its sense and meaning. For example, try to imagine a situation where someone in the family has died. Clearly, a child who understands the meaning of death will react differently to this event than a child who does not understand anything of what has happened. Or in a family the parents decide to split up. Very frequently we come across families with difficult children where this has occurred. Again, in a case where the child understands what is going on and its true significance, he will react to it in a different way than another child who fails to understand it.

To put it more succinctly and simply, I could say that *the influence of environment on child development will, along with other types of influences, also have to be assessed by taking the degree of understanding, awareness and insight of what is going on in the environment into account*. If children possess various levels of awareness, it means that the same event will have a completely different meaning for them. We know that, frequently, unhappy events may have a happy meaning for a child who does not understand the significance of the event itself, especially in view of the fact that he is now allowed what he is normally not allowed – just to keep him quiet and prevent him from pestering he may be given sweets and, as a result, the child might end up experiencing his mother's dangerous illness as an event which for him is joyful and fun, and to look at him, he may appear like a birthday child. The crux of the matter is that whatever the situation, its influence depends not only on the nature of the situation itself, but also on the extent of the child's understanding and awareness of the situation.

When the case involves mentally retarded children, particularly severely retarded ones, we often have the impression that they do not have sufficient understanding and

frequently, for this very reason, are spared and protected from situations which may cause extreme suffering for normal children. Everyone is familiar with the following frequently occurring situation in which children find themselves when they are deformed. Recently we had such a severely deformed child in our clinic. The children were teasing him, and the child himself, realizing that he was very deformed, talked about it. For a child with normal intellect, such a situation could become the source of endless trauma, because everywhere he goes he is constantly reminded of his deformity, of the fact that he is not like all the other children, that everyone is laughing at him, teasing him, putting him down, that they refuse to play with him; the continual humiliation which the child encounters frequently results in extremely unpleasant emotional experiences [*perezhivanija*], leading to neuroses, functional disorders or other psychogenic disorders, i.e. arising from these emotional experiences [*perezhivanija*]. But nothing like this happened to the child I have been describing here. This child is also being teased and humiliated and in fact he, too, has ended up in an extremely difficult position, but all this for him is like water off a duck's back, because he is not capable of generalizing what was happening to him. Every time when he now is being teased he does not like it, but neither is he able to generalize it and, as a result, he never reached the stage which every normal child reaches, by developing a feeling of inferiority, a sense of humiliation and one of damaged self-esteem. This does not happen because he does not fully comprehend the sense and meaning of what is happening to him.

Here we have a striking example of how an inadequate interpretation of some event or situation, which we come across in connection with mentally retarded children, often protects them from illnesses, from pathological reactions and from developmental disorders to which other children are subject.

So what exactly does happen? We may find a situation in the environment which would result in a normal child becoming traumatized and would lead to the development of a disorder. But this does not happen in the case of our child. Why is this? It is due to the fact that the child is not fully aware of his situation. And the case which I have used as an example here, as a pathological case, in reality occurs at all ages. One and the same situation, when it occurs when a child is one year old or when he is three, or seven or 13, would have a different significance. *One and the same event occurring at different ages of the child, is reflected in his consciousness in a completely different manner and has an entirely different meaning for the child.*

In connection with this, a quite complicated concept, but one which is very important for the understanding of how environment influences development, is of some interest. The concept has this connection because it represents the meaning of our words. You know, of course, that we mainly communicate with the people surrounding us by using speech. This represents one of the basic means with which a child attains psychological communication with the people around him. Speech research has shown that the child's word meaning does not coincide with our word meaning, i.e. the word meaning at different ages has a different structure. I shall now attempt to explain this with the help of an illustration.

First, let us ask ourselves what exactly is the meaning of a word. I think that you will agree with me if I say that the meaning of a word, from the psychological point of view, always represents a generalization. Let us take such words as 'street', 'man' or 'weather'. These words do not relate just to one single object, but to a certain class and a certain group of objects. From the psychological point of view, the meaning of any word always represents a generalization. This we understand and this is the first main point.

These generalizations tend to be constructed by children in a different way than they are by us. After all, a child does not invent his own language, but he finds the words in a ready-made state, fixed to ready-made things, and he assimilates our language and the meaning the words have in our language. This means that a child attributes [confers] these words to the same objects to which we attribute them. When a child says 'weather' or 'man', he means by it the same things, the same objects as all of us, but he generalizes these things in a different way, using a different mental act. *He still lacks such higher generalizations which we call concepts and his generalizations have a more concrete, more graphic [nagljadnyj] character.* And it is said that these generalizations, which children form during early stages of their development, are reminiscent of those generalizations which we find exemplified in our family names. For us, too, the family name does not represent a single person, but a group of people. But how is this group of people generalized under one family name? It is generalized on the basis of a factual kinship relation; not on the basis of logical relationships as a particular category, but on the basis of factual kinship between these people. There is no way I can tell by looking at a man whether he is a Petrov or an Ivanov. But if I learn that he is Petrov's son, or Ivanov's son, i.e. if I find out his real relationships with other people, I will also find out his affiliation with one of the family names. In the same way as we construct generalizations of family names, so – as research has shown – pre-school children construct generalizations of all sorts of objects. In other words, the child assigns words to the same objects as we do, but he generalizes these objects in a different *more concrete, more visual, [and] more factual way.*

As a result of this, children's generalizations are different from ours and this in turn results in the well known fact that a child interprets reality, apprehends the events which are happening around him, not entirely in the same way as we do. The adult is not always able to communicate the full meaning of some event to a child. The child understands part of it, but not completely, he understands one side of the matter, but not the other, he understands the matter, but he understands it in his own way, reworking and reshaping it to suit himself, and selecting only certain parts of what had been explained to him. So, as a result, *children at different stages of their development do not yet possess a system of communication with adults which is sufficiently compatible.* This means that a child at different stages of his development does not generalize to the same extent, and consequently, he interprets and imagines the surrounding reality and environment in a different way. Consequently, the development of thinking in children in itself, the development of generalization in children in itself, is also connected with the way the environment influences children.

So, as time goes by, the child begins to understand more and more. Now he is able to understand the things he could not understand earlier. Does this mean that now some events occurring in the family will affect the child in a different way? Yes. In the past they may have had a neutral character, now they become basic factors in the child's development. This means that the development of thinking in children in itself, the meaning of children's words, is what determines the new relationship which can exist between the environment and the different developmental processes.

If we wanted to generalize everything we have been saying till now, we could formulate it something like this: as I have already said, paedology does not so much investigate the environment itself using its absolute indicators, but the role and influence of environment on child development, because the relationship between a given environmental situation and the child assumes primary importance in the study of the role of environment in development, and this relationship can be elucidated by using various concrete examples. As I have said, one and the same situation in a family can result in three different types of influence on the development of the children involved. Depending on his age, the environment exerts this or that type of influence on the child's development, because the child himself changes and his relation to this situation changes. The environment exerts this influence, as we have said, via the child's emotional experiences [*perezhivanija*], i.e. depending on how the child has managed to work out his inner attitude to the various aspects of the different situations occurring in the environment. The environment determines the type of development depending on the degree of awareness of this environment which the child has managed to reach. And we could show many more instances which would demonstrate that absolutely every aspect of development will determine which way the environment will influence development, i.e. the relationship between the environment and the child and not just the environment in its own right, or just the child in its own right, will always be central.

We have now reached the conclusion that environment cannot be regarded as a static entity and one which is peripheral in relation to development, but must be seen as changeable and dynamic. Here we have environment, a situation which influences the child in one way or another and directs his development. But the child, his development, keeps changing, becomes different. And it is not just the child who changes, for the relationship between him and his environment also changes, and the same environment now begins to have a different influence on the child. This *dynamic and relative interpretation of environment* is the most important source of information for paedology when environment is under discussion. But this in itself is far from concrete. We may well agree that it is important to study the relation with the environment, that if the relation is different the environment exerts its influence in different ways. However, the most important thing has not yet been said: what is the basic role of environment in relation to child development? I would now like to give an answer to this question.

To begin with, once again we come across the same problem which was facing us when we were investigating heredity. If you recall, we said then that no all-out definition of the influence of heredity on every aspect of development exists or can exist, and that, when we want to study not just the laws of heredity, which are basically uniform in nature, and the influence of heredity on development, then we must differentiate the effects of heredity upon various aspects and development. If you remember, I tried to demonstrate how results obtained from an investigation of twins have disclosed that heredity does not play the same role in relation to higher psychological functions as it does in relation to elementary psychological functions.³ So it follows that one must differentiate the effect of heredity upon various aspects of development.

The same thing applies entirely to environment, for example to the influence of environment on such developmental processes as growth and children's logical thinking. It is unlikely that, apart from the general principle which remains in power, the relation of environment to a given aspect of development has everywhere the same degree of influence. Apart from this general principle, it is unlikely that environment carries the same influence and exerts this influence in exactly the same way in relation to all aspects of development. This is not so. Together with a dynamic interpretation of environment, we are beginning to understand that the different aspects of development have different relations with the environment. It is for this reason that we have to study the various environmental influences differentially as, for example, on the child's growth, the environmental influence on the growth patterns of individual parts and systems in the organism and, say, its influence on the development of sensory and motor functions in children, the influence environment exerts on the development of psychological functions, etc., etc.

When one wants to set forth the theory of the environment, the easiest thing would be to tackle that which is central and essentially important, rather than some narrow aspect of development, and to choose that side of the developmental process where the influence of environment is expressed with maximum force. Let us consider the development of a child's personality, his consciousness, and of his relationship with the reality around him, and let us examine what the specific role of environment consists of in the development of a child's personality, consciousness and relationship with reality.

If we consider all the specifically human personality traits which have evolved during the period of human historical development, we are bound to come to an extremely simple conclusion, namely that here, the relations which exist between environment and child development are characteristic of childhood development and of no other general type of development.

What is this specific relationship between environment and development, if we are talking about the development of a child's personality, and its specifically human characteristics? It seems to me that this singularity consists of the following, namely *in child development that which it is possible to achieve at the end and as the result of the*

developmental process, is already available in the environment from the very beginning. And it is not simply present in the environment from the very start, but it exerts an influence on the very first steps in the child's development. Let me clarify this by the following example.

We have a child who has only just begun to speak and he pronounces single words, as children who are just mastering the art of speech tend to do. But is fully developed speech, which the child is only able to master at the end of this period of development, already present in the child's environment? It is, indeed. The child speaks in one word phrases, but his mother talks to him in language which is already grammatically and syntactically formed and which has a large vocabulary, even though it is being toned down for the child's benefit. All the same, she speaks using the fully perfected form of speech. Let us agree to call this developed form, which is supposed to make its appearance at the end of the child's development, the final or ideal form (as it is called in contemporary paedology) – ideal in the sense that it acts as a model for that which should be achieved at the end of the developmental period; and final in the sense that it represents what the child is supposed to attain at the end of his development. And let us call the child's form of speech the primary or rudimentary form. The greatest characteristic feature of child development is that this development is achieved under particular conditions of interaction with the environment, where this ideal and final form (that form which is going to appear only at the end of the process of development) is not only already there in the environment and from the very start in contact with the child, but actually interacts and exerts a real influence on the primary form, on the first steps of the child's development. *Something which is only supposed to take shape at the very end of development, somehow influences the very first steps in this development.*

The same sort of thing can be seen everywhere, say in the way that children's conception of number, their arithmetical thinking, develops. It is well known that at the beginning, during pre-school age, a child still has a very limited and vague idea about quantities. However, these primary forms of children's arithmetical thinking are involved in interaction with the already established arithmetical thinking of adults, i.e. once again, the final form which should result from the whole course of child development, is already not only present, but actually determining and guiding the first steps which the child takes along the road of development of this form.

In order for you to realize fully to what extent this creates very special, inimitable and unique conditions inherent in child development, I will put the following question to you: can you imagine, for example, what biological evolution is like? Could one possibly imagine that it would work in such a way that the ideal, higher form, which has appeared only as a result of development, would already exist during the initial period when only the lower, most primary forms were there, and for these lower forms to have evolved under its direct influence? Of course, nothing like this could ever be imagined.

In the realm of historical social development, could one ever imagine that when the primary form of human economy and society still existed, a higher form, say a

communist economy and society, was already there to actually direct these first steps of the historical development of humanity? It is quite impossible to imagine such a thing.

Could one imagine, in the context of human development, that when the most primitive man had only just appeared on earth, a higher final form already existed, a man of the future as it were and that this ideal form could somehow directly influence the first steps the primitive man was taking? One cannot imagine this. So things never happen in such a way in any of the types of development known to us, that at the moment when the primary form is taking shape, a higher, ideal form which appears at the end of a period of development is there at the same time, and that it becomes involved in direct reciprocal action with the child's first steps along the road of development of this rudimentary or primary form. This fact contains the greatest peculiarity of child development as compared with other types of development, where we never detect or find any equivalent state of affairs.

What does all this mean? I think that one can draw a very important conclusion which can immediately make clear to us the singular role that environment plays in child development. How does this ideal or final form of, say, speech, develop in children? We have seen that, at the beginning of his development, a child has only mastered the primary form, i.e. in the realm of speech, for example, he is only able to pronounce individual words. But these individual words make up part of the child's dialogue with his mother, who has already mastered the ideal form, the same form which the child should achieve at the end of his development. Will the child be capable of mastering this ideal form, will he simply assimilate and imitate it in one or one and a half years of his life? He will not. But, nevertheless, can a child this age, moving from the first to the last step, gradually adjust his primary form to this final one? Yes, investigations show that this is exactly what does happen.

Consequently, what this signifies is that environment is a factor in the realm of personality development and its specific human traits, and its role is to act as the source of this development, i.e. environment is the source of development and not its setting.

What does this mean? First of all it indicates a very simple thing, namely that if no appropriate ideal form can be found in the environment, and the development of the child, for whatever reasons, has to take place outside these specific conditions (described earlier), i.e. without any interaction with the final form, then this proper form will fail to develop properly in the child.

Try to imagine a child who is growing up among deaf people and is surrounded by deaf and dumb parents and children his own age. Will he be able to develop speech? No, but will he develop babbling? Yes, he will. Babbling develops even in deaf and dumb children. This means that babbling is one of the functions which are, more or less, part of the most basic hereditary instincts. But speech will not develop at all in such a child. In order for speech to develop, it is necessary for this ideal form to be present in the environment and to interact with the child's rudimentary form; only then can speech development be achieved.

Firstly, this means that environment in this sense constitutes a source of all the child's specific human traits, and if the appropriate ideal form is not present in the environment, then in the child the corresponding activity, characteristic or trait will fail to develop.

Secondly, try to imagine that this ideal form is not to be found in the child's environment, that his development is not subject to the law which I have just been describing, namely that the final form is not present, does not interact with the rudimentary form, but that the child develops among other children, i.e. that his environment is made up of children of his own age who are all at the lower, rudimentary form stage. In such a situation, will the proper activity and traits develop in this child? Research shows that it will, but in an extremely peculiar way. They will always develop very slowly and in an unusual manner, and will never attain the level which they reach when the suitable ideal form is present in the environment.

Let us look at two examples. If one observes a deaf and dumb child, then it turns out that his speech development will follow two separate lines, depending on whether this deaf and dumb child is the only child in the family or whether he is growing up with other deaf and dumb children. Research has revealed that deaf and dumb children create their own peculiar speech, mimicry and a very richly developed sign language. Such a child develops his own different, personal language. The children develop this language in co-operation, in society. But can one compare the development of this sign language with the development of speech in children who have a chance to interact with the ideal form? Of course not. So this, generally, means that if we are dealing with a situation where this ideal form is not present in the environment, and what we have is interaction between several rudimentary forms, the resulting development has an extremely limited, reduced and impoverished character.

Now let us look at the other example. You have probably heard that children attending a day nursery have a number of educational advantages over children brought up in the family; already, at a very young age, they learn how to be independent, how to do things for themselves and about discipline. But, at the same time, there are also some negative sides to being educated in a nursery school and not at home, and one of these negative aspects, which is the cause of serious worry for all people working with this age group, is delayed speech development. As a rule, the nursery school-aged child who is being educated at home develops speech earlier, and reaches a higher and more sophisticated level than a child who gets his corresponding education in day nurseries. Why is this so? For the simple reason that at home a child has his mother or another person who is taking her place, say, a nanny, and he hears her speak directly to him, which amounts to a continuous interaction process with the ideal form. But in nursery school, where there may only be one teacher to several or to a whole group of children, a child has much less chance of direct interaction with this ideal form. What happens instead is that these children have a chance to talk to one another. But they do not speak very well or very much, and their own conversations cannot serve as a source of any significant development for them. It appears that,

in order for any auspicious and successful development of the higher specific human traits to occur, it is necessary for this ideal final form to guide, if one can put it in this way, the child's development from the very start.

So this is why when a child grows up in a group of other children, say in a day nursery, his speech development remains limited. And if one compares large numbers? Take a number of physically fit three year olds who are growing up in favourable conditions, and compare those growing up in day nurseries with those staying at home. You will see that, on the average, from the point of view of speech development, the children who stay at home will rate higher than the children in nursery schools, but at the same time, in many ways, the nursery school child will score considerably higher than the home reared child, as far as independence, discipline and looking after themselves are concerned.

Another simple, hypothetical example. Imagine a child who will develop his concept of numbers, his arithmetical thinking, only among other children, who will be left to his own devices in an environment where no developed form of arithmetical thinking exists, rather than in school or in kindergarten, i.e. without any interaction with the ideal form of adults. What do you think, will these children get far in developing their arithmetical thinking? None of them will, not even the mathematically gifted ones among them. Their development will remain extremely limited and very narrow in scope.

This means that we can draw a conclusion from all these examples which amounts to the idea that in these cases when, for various external or internal reasons, the interaction between the final form which exists in the environment and the rudimentary form which a child possesses, becomes disrupted, the development of the child turns out very limited, and what results is a more or less completely underdeveloped state of the child's proper forms of activity and traits.

There are many different reasons why this interaction can become disrupted. These can be external circumstances – the child can hear, but he is living with deaf and dumb parents, or internal ones – he is living with parents who can speak but is himself deaf. In both cases the result will be the same, namely that the child is excluded from any interaction between the rudimentary and the ideal form and thus the whole development becomes disrupted.

I think that the theory about the interaction of ideal and rudimentary forms and the examples which I have provided may have elucidated the idea I stated at the very beginning, namely that *the environment's role in the development of higher, specifically human characteristics and forms of activity is as a source of development*, i.e. that it is just this interaction with the environment which becomes the source of these features in children. And if this interaction with the environment becomes disrupted, the proper traits themselves will never appear if their only source is based in the child's hereditary instincts.

I would now like to attempt, in a few words, to assess the theoretical meaning of all this and to further clarify this theory, which should appear sufficiently convincing and clear if it is explained from the point of view of what is generally known about

human development and human nature, and not simply from the point of view of paedology.

What is the significance of this principle which I have just explained to you? It signifies a very simple fact, namely that *man is a social creature, that without social interaction he can never develop in himself any of the attributes and characteristics which have developed as a result of the methodical^h evolution of all humankind.*

How did you and I develop our power of speech? After all, we did not create this speech by ourselves. Humanity created it during the entire course of its historical development. My own development consists of the fact that, during the course of my general development, I mastered this power of speech following the historical laws of my development and through the process of interaction with the ideal form. But can you imagine what would have happened if I had found myself in the same circumstances as a deaf child, where I would have had to create my own language? I would not have been able to make use of the form which has been shaped during the course of the development of humanity. I would not have got very far. I would have created speech whose dimensions would have been very primitive, elementary and circumscribed. In fact, this means that just the very fact that a human being is a creature who is social by his very nature, whose development consists of, among other things, mastering certain forms of activity and consciousness which have been perfected by humanity during the process of historical development, this fact is essentially what provides the foundation for this interaction between the ideal and the rudimentary form.

The environment is the source of development of these specifically human traits and attributes, most importantly because these historically evolved traits of human personality, which are latent in every human being due to the organic makeup of heredity, exist in the environment, but the only way they can be found in each individual human being is on the strength of his being a member of a certain social group, and that he represents a certain historical unit living at a certain historical period and in certain historical circumstances. Consequently, these specifically human characteristics and attributes manifest themselves in slightly different ways in child development than do other traits and attributes which are more or less directly conditioned by the course of prior historical human development. These ideal forms which have been refined and perfected by humanity and which should appear at the end of the development process, prevail in the environment. These ideal forms influence children from their very early beginnings as part of the process of mastering of the rudimentary form. And during the course of their development children acquire, as their personal property, that which originally represented only a form of their external interaction with the environment.

I should like to end by clarifying the nature of this last principle which governs the influence of environment on child development and which will elucidate for us what I have in mind when I speak about environment as a source of development. During the course of child development, which we intend to examine at great length when we discuss the psychological development in children, the researcher is faced

with one basic principle. I intend to formulate it only in a general way and to elucidate it by using just one example.

This principle consists of the fact that *the child's higher psychological functions, his higher attributes which are specific to humans, originally manifest themselves as forms of the child's collective behaviour, as a form of co-operation with other people, and it is only afterwards that they become the internal individual functions of the child himself.*⁵

I shall take but one example which should make all this clear to you. You know that speech first makes its appearance as a means of communication with other people. With the help of speech a child can converse with other people around him and they, in turn, can talk to him. But now take each of us. You know that each of us possesses so called inner speech and that this inner speech, i.e. the fact that we are able to formulate in silence for ourselves ideas embodied in words, plays a major role in our thinking. This role is so great, that some researchers have even, albeit incorrectly, identified the process of speech with the process of thinking. But, in actual fact, for every one of us, this inner speech is one of the most important functions we have at our disposal. When this inner speech in human beings becomes disturbed due to some disorder, it can result in the most severe disruption of the entire thinking process.

How did this process of inner speech in each of us come about? Research has revealed that *the emergence of inner speech is based on external speech. Originally, for a child, speech represents a means of communication between people, it manifests itself as a social function, in its social role. But gradually a child learns how to use speech to serve himself, his internal processes. Now speech becomes not just a means of communication with other people, but also a means for the child's own inner thinking processes.* Then it no longer represents that speech which we use aloud when we communicate with one another, but it becomes an inner, silent, tacit speech. But where did speech as a means of thinking come from? From speech as a means of communication. From the external activity which the child was involved in with the people around him, appeared one of the most important inner functions without which man's very thinking process could not exist.

This example illustrates the general proposition concerning the understanding of environment as a source of development. An ideal or final form is present in the environment and it interacts with the rudimentary form found in children, and what results is a certain form of activity which then becomes a child's internal asset, his property and a function of his personality.

Notes

This was the fourth lecture published in Vygotsky, L. S. 1935: *Osnovy Pedologii* [*Foundations of Paedology*] (pp. 58-78). Leningrad: Izdanie Instituta. The chapter heading is our invention. In reality, the chapters (or, rather, lectures) were simply numbered. The whole came out posthumously and was edited by Vygotsky's student and collaborator M. A. Levina. It is unclear

whether Vygotsky has actually written the lectures that form the basis of *Foundations of Paedology* or whether the (typed!) text formed the result of the notes taken by one or more students during Vygotsky's lectures. Judging by the style (which is definitively that of oral speech) and some other clues (expressions such as 'The subject of my lecture *today* . . .' etc.), the latter case seems more likely, but if it is true then immediately another question comes up: whether Vygotsky at least approved of the present transcriptions of his lectures. Again, we do not know for sure. The facts are that the lectures were published by the Faculty of Paedology of the Herzen State Pedagogical Institute in Leningrad (where Vygotsky lectured in the last years of his life) under the editorship of M. A. Levina and were used as a textbook for students of paedology.

- 1 The Russian term serves to express the idea that one and the same objective situation may be interpreted, perceived, experienced or lived through by different children in different ways. Neither 'emotional experience' (which is used here and which only covers the affective aspect of the meaning of *perezhivanie*), nor 'interpretation' (which is too exclusively rational) are fully adequate translations of the noun. Its meaning is closely linked to that of the German verb 'erleben' (cf. 'Erlebnis', 'erlebte Wirklichkeit').
- 2 Here Vygotsky is using the verb *perezhivat* (German: 'erleben') from which the noun *perezhivanie* has been deduced. See note 1.
- 3 Vygotsky is referring to the twin research about which he and Luria reported several times. See pp. 312-15 of van der Veer, R. and Valsiner, J. 1991: *Understanding Vygotsky: A quest for synthesis*. Oxford: Blackwell Publishers.
- 4 'Methodical' appeared in the original text. It should probably be 'historical'.
- 5 The famous principle which Vygotsky borrowed from Janet, Baldwin and Piaget. Part of its history has been sketched in Van der Veer, R. and Valsiner, J. 1988: Lev Vygotsky and Pierre Janet. On the origin of the concept of sociogenesis. *Developmental Review*, 8, 52-65; Valsiner, J. and Van der Veer, R. 1988: On the social nature of human cognition. *Journal for the Theory of the Behavioral Sciences*, 18, 117-35, and Van der Veer, R. and Valsiner, J. 1991: Sociogenetic perspectives in the work of Pierre Janet. *Storia della Psicologia*, 3, 6-23.