

A Contribution to the Theory of the Development of the Child's Psyche*

1

To throw light on the theoretical problem of the motive forces of the development of the child's psyche, we shall first clarify what determines the psychological character of personality at any one stage of its development.

The first point to be made is the following: during a child's development under the influence of the concrete circumstances of its life, the place it objectively occupies in the system of human relations changes.

We shall try and demonstrate this from a description of the real stages through which a child passes in its development.

Preschool childhood is the time of life when the world of human reality around a child is opening up more and more to it. In its activity, and above all in its games, which have now got beyond the narrow limits of manipulating the objects around it and of contact with the persons directly around it, a child penetrates a wider world, assimilating it in an effective way. It assimilates the object world as a world of human objects, reproducing human actions with them. It drives a 'car', aims a 'gun', although it is impossible really to ride in its car or to shoot with its gun. But at this time in its development that is immaterial to it, because its basic, vital needs are met by adults regardless of the objective productiveness of its activity.

A child experiences its dependence on the persons directly around it; it has to reckon with the demands those around it make on its behaviour, because that really determines its intimate, personal relations with them. Not only do its successes and failures depend on those relations, but its joys and sorrows are also involved in them, and they have the force of a motive.

During this period of a child's life the world around it breaks down for it, as it were, into two groups. One group consists of the persons intimately close to it, relations with whom determine its relations with all the rest of the world; these are its mother, its father, or those who take their place for the child. A second, wider circle is formed by all other persons, relations with whom, however, are mediated for it by the relations it has established in the first, smaller circle. And that is not simply so when it is brought up in a family. Assume that a preschool child that has been raised in a family is put into a kindergarten. Its mode of life seems to change radically and to some extent that is true, but psychologically its activity remains as before within its basic, very important limits.

We all know how unique the relations of children of this age with the nursery-school teacher are, how necessary her personal attention is for them, and how often they have recourse to her mediation in their relations with coevals. Relations with her may be said to form part of the small, intimate circle of the children's contacts.

* This paper follows the text of an article published in *Sovetskaya pedagogika*, 1945, 4. The main points developed in it were first formulated by the author in a paper *The Child's Psychic Development and Education*. (*Nauchnaya sessiya Khar'kovskogo pedagogicheskogo instituta. Tezisy dokladov*, Kharkov, 1938 and in discussion article *Pedagogy and Psychology* (*Uchitel'skaya gazeta*, 1941, No. 42); they also found reflection in several of the author's subsequent works.

A child's relations within a group of children are also peculiar. What links children of three to five stably with one another is still largely the personal, the 'private' so to speak, element in their development leading to a real group spirit. In this the teacher plays the main role – once again by virtue of her personal relations with the children.

When we look closely into all these features of the preschool child, it is not difficult to discover the general basis connecting them. This is the child's real position, from which the world of human relations unfolds before it, a position that is governed by the objective place it occupies in these relations.

A six-year-old may be able to read excellently, and in certain circumstances its knowledge may be relatively great. That, however, does not and cannot in itself erase the childish, the truly preschool element in it. On the contrary, something childish colours all its knowledge. When it happens, however, that a child's basic life relations are restructured, when, for example, it has a little sister on its hands, and its mother treats it as her helper, a participant in adult life, the whole world then opens up in a quite different way. It does not matter that it still knows little and understands little; the quicker it gives what it knows a new meaning and the quicker its general psychic character will change.

In normal cases the transition from preschool childhood to the next stage in the development of psychic life occurs in connection with a child's enrolment in school.

It is difficult to exaggerate the significance of this event in a child's life. The whole system of its relations is reorganised. The essential point is not, of course, that the schoolchild is obliged in general to do something; it had duties even before entering school. The essential point is that there are now not just duties to parents and teachers, but are objectively obligations to society. They are duties on whose fulfilment its place in life, its social function and role, and hence also the content of all its subsequent life, depend.

Is the child conscious of this? It knows about it, of course, and usually, moreover, long before it goes to school. But these demands acquire real, psychologically effective sense for it only when it begins to study; at first, moreover, they still emerge in a very concrete form, namely in the form of the demands of the teacher and the school head.

Now, when a child sits down to prepare its lessons, it perhaps feels itself, for the first time, to be occupied with a really important matter. At home the little ones are forbidden to bother it, and even adults at times sacrifice their own affairs in order to give it the chance to work. This is quite different from its previous games and occupations. The very place of its activity in the adult, 'truly real' life around it has become different.

A child may or may not be bought a toy, but it is impossible not to buy it a textbook or an exercise book. The child therefore requests a schoolbook to be bought for it quite differently to how it asks for a toy to be bought. These requests have a different sense not only for its parents but above all for the child itself.

The main point, finally, is that now the child's intimate relations lose their previous determinant role in the broader circle of its contacts; they themselves are now determined by these broader relations. However good the intimate, 'homely' relations are that the child feels for itself, a bad mark from the teacher, for example, inevitably casts a shadow on them. It is all quite different from what it was previously, before school. It is quite different from a complaint by the kindergarten teacher. The mark itself crystallises the new relations, as it were, and the new form of contact that the child has entered into.

Nothing in its behaviour can be allowed to anger the school teacher: you may not bang the top of your desk, not even once, and not talk with a neighbour during a lesson; and you may try very, very hard really to win the teacher's favour, yet all the same she will give you a

poor mark for writing the names of flowers and birds with a capital letter in the dictation test, even when you give her the argument that everyone at home and at kindergarten accepted: 'I didn't do it on purpose', 'I didn't know', 'I thought it was right'. This is what we adults call the objectivity of the school mark.

Furthermore, let the pupil even understand later that neither 'rose' nor even 'sun' is written with a capital letter, and even if it gets a good mark, even a top one, at the next dictation test, and even if the teacher praises it for its progress, the bad mark received still does not disappear from the exercise book or from the school report card, because of that; the new mark goes down next to it, not in place of it.

The transition to the next stage in the development of a child's life and consciousness takes place with the same inner pattern. For the teenage pupil this transition is associated with its inclusion in the forms of social life available to it (involvement in certain social undertakings that are not of a specially child character; the Young Pioneer organisation; a new content in hobby circles). At the same time, the real place that the child occupies in the everyday life of the adults around it and in the family's affairs also alters. Now its physical powers and its knowledge and abilities sometimes put it on an equal footing with adults, and it even feels its superiority to something or other; a boy is sometimes the recognised fixer of appliances, is sometimes the strongest person in the family, stronger than his mother and sisters, and is called on for help when a man is needed, and sometimes he is the main home commentator on public events.

From the aspect of consciousness this transition to senior school age is marked by growth of a critical attitude toward adults' demands, behaviour, and personal qualities and the birth of new, for the first time truly theoretical, interests. A need arises in the senior pupil to know not only the reality around it but also what is known about this reality.

At a first, superficial glance it may seem that there are no changes in the place occupied by a schoolchild in the system of human relations at the end of the period of childhood and youth, and with its transition to a job. But that is only outwardly. The youth who today is simply a diligent beginner, proud and satisfied in his consciousness of being a worker, tomorrow becomes one of the enthusiasts of advanced production. While remaining a worker, he now occupies a new place, his life has acquired a new content, and that means that he comprehends the whole world in a new way now.

The change in the place a child occupies in the system of social relations is thus the first thing that needs to be noted when trying to find an answer to the question of the driving forces in the development of its psyche. This place, however, does not in itself, of course, determine development; it simply characterises the existing stage already achieved. What directly determines the development of a child's psyche is its life itself, and the development of the real processes of this life, in other words, the development of the child's activity, both outward and inner. But its development in turn depends on its actual living conditions.

In studying development of the child psyche, we must therefore start by analysing the development of the child's activity, as this activity is built up in the concrete conditions of its life. Only with such an approach can the role both of the external conditions of its life and of the potentialities it possesses be elucidated. Only with such an approach, based on analysis of the content of the child's developing activity itself, can the leading role of education and upbringing operating precisely on its activity and its attitude to reality, and therefore determining its psyche and its consciousness, be properly understood.

Life or activity as a whole is not built up mechanically, however, from separate types of activity. Some types of activity are the leading ones at a given stage and are of greater sig-

nificance for the individual's subsequent development, and other types are less important. Some play the main role in development and others a subsidiary one. We must therefore speak of the dependence of the psyche's development on the leading activity, and not on activity in general.

We can say, accordingly, that each stage of psychic development is characterised by a definite relation of the child to reality that is the leading one at that stage, and by a definite, leading type of its activity.

The criterion of the transition from one stage to another is precisely the change in the leading type of activity, in the child's leading relation to reality.

What is this 'leading type of activity'?

Purely quantitative indices are by no means the criterion of leading activity. The leading activity is not simply the one most often encountered at a given stage of development, the activity that a child devotes much of its time to.

We call leading activity that activity of a child that is characterised by the following three attributes.

(1) It is the activity in whose form other, new types of activity arise, and within which they are differentiated. For example, instruction in the narrowest sense of the term, which first develops already in preschool childhood, arises first in play, i.e. precisely in the leading activity of that stage of development. The child begins to learn by playing.

(2) Leading activity is the activity in which particular psychic processes take shape or are reorganised. The child's processes of active imagination, for example, are moulded first in play, and the processes of abstract thinking in studies. It does not follow from this that the moulding or restructuring of all psychic processes takes place only within the leading activity. Certain psychic processes are not directly shaped and reorganised in the leading activity itself but in other forms of activity genetically linked with it. The processes of abstracting and generalising colour, for example, are not moulded in preschool childhood first in play itself, but in drawing, colour appliqué work, etc., i.e. in forms of activity that are only associated with play activity in their source.

(3) Leading activity is the activity on which the main psychological changes in the child's personality observed at a given period of development depend in the closest way. It is precisely in play that the preschool child, for example, assimilates people's social functions and appropriate standards of behaviour ('What is a Red Army man?', 'What does the director, the engineer, the worker do in a factory?'), and this is a very important moment of the moulding of its personality.

Leading activity is therefore the activity whose development governs the chief changes in the psychic processes and psychological features of the child's personality at a given stage of its development.

The stages of development of the child's psyche, however, not only have a definite content in its leading activity but also a certain sequence in time, i.e. a definite link with children's age. Neither the content of the stages nor their time sequence, however, is given once and for all and immutable.

The point is that both each new generation and each individual belonging to a given generation has certain, already given conditions of life which also make the content of its activity, whatever it is, possible. Therefore, although we note a certain stadal character in the development of the child's psyche, the content of the stages, however, is by no means independent of the concrete, historical conditions in which the development takes place. It is on these conditions that it primarily depends. The concrete, historical conditions make

their influence felt both in the concrete content of an individual stage of development and in the whole course of the psychic development process as a whole. The duration and content of the period of development, for example, that is a person's preparation, as it were, for his involvement in social and work life, i.e. the period of upbringing and training, are historically far from always the same. Its duration varies from epoch to epoch, lengthening as society's requirements made in that period grow.

Hence, although the stages of development are also spread over time in a certain way, their age limits, however, depend on their content, and that in turn is governed by the concrete, historical conditions in which the child's development is taking place. Thus, it is not the child's age as such that determines the content of a stage of development; the age limits of a stage themselves, on the contrary, depend on its content and alter *pari passu* with the change in the socio-historical conditions.

These conditions also determine what activity of a child precisely will become the leading one at a given stage in the development of its psyche. Mastery of the object reality immediately surrounding it, and the play in which it assimilates a broader round of phenomena and human relations, systematic study at school, and further special training or work – such is the succession of the leading activities and leading relations that we can note in our time and in our Soviet conditions.

What relations precisely link the child's leading type of activity and the real place it occupies in the system of social relations? How are the changes in this place and in the child's leading activity linked together?

The answer to that, in its most general form, is that the child begins to realise in the course of development that the place it used to occupy in the world of human relations around it does not correspond to its potentialities, and strives to alter it.

An open contradiction arises between the child's mode of life and its potentialities, which have already outstripped this way of life. Its activity is reorganised accordingly, and it thus passes to a new stage in the development of its psychic life.

By way of example we can take cases of a child's 'outgrowing' of its preschool childhood. At first, in the junior and middle group of kindergarten, it joins in the group's life eagerly and with interest, and its games and occupations are full of sense for it; it eagerly shares its achievements with its seniors, shows its drawings, recites verses, and tells about the events on an ordinary walk. It is not embarrassed in the least that adults listen to it with a smile, with half an ear, frequently not paying proper attention to all the things that are important to it. For it itself they have sense, and that is enough for them to fill its life.

A certain time passes, however, and the child's knowledge increases, its capacities become greater, and its powers grow, and as a result activity in the kindergarten loses its former sense for it, and it more and more 'drops out' of the kindergarten's affairs. Or rather, it tries to find a new content in them; groups of children form who begin to live their own, special, hidden, no longer 'preschool' life, the street, the courtyard, the society of older children become more and more attractive. The child's self-assertion more and more often takes on forms that infringe discipline. This is what is known as the seven-year-old crisis.

If a child remains out of school for another whole year and is treated at home as before as a little one, and drawn properly into the family's workaday life, this crisis can become extremely acute. The child lacking social obligations finds them for itself, perhaps in quite abnormal forms.

These crises – the three-year-old crisis, the seven-year-old crisis, the adolescent crisis, the youth crisis – are always associated with a change of stage. They indicate in clear, obvi-

ous form, that these changes, these transitions from one stage to another have an inner necessity of their own. But are these crises inevitable in a child's development?

The existence of development of crises has long been known and their 'classic' interpretation is that they are caused by the child's maturing inner characteristics and the contradictions that arise on that soil between it and the environment. From the standpoint of that interpretation the crises are, of course, inevitable because these contradictions are inevitable in any conditions. There is nothing more false, however, in the theory of the development of a child's psyche than this idea.

In fact crises are not at all inevitable accompaniments of psychic development. It is not the crises that are inevitable but the turning points or breaks, the qualitative shifts in development. The crisis, on the contrary, is evidence that a turning point or shift has not been made in time. There need be no crises at all if the child's psychic development does not take shape spontaneously but is a rationally controlled process, controlled upbringing.

In ordinary cases the change of leading type of activity and the child's transition from one stage of development to another correspond to an inner need that is arising and occur in connection with the child's being faced by education with new tasks corresponding to its changing potentialities and new awareness.

2

How does the change of leading activity take place on this basis?

To answer that we must first, as a preliminary, differentiate between two concepts: namely, activity and action.

We do not call every process an activity. By this term we mean only those processes which, by realising man's relations with the world, meet a special need corresponding to it. We do not properly call such a process as, for example, remembering, an activity, because it does not, as a rule, in itself, realise any independent relation with the world and does not meet any special need.

By activities we mean processes that are psychologically characterised by what the process as a whole is directed to (its object) always coinciding with the objective that stimulates the subject to this activity, i.e. the motive.

Let us explain this by an example. Let us assume that a student, preparing for an examination, reads a book on history. Is that psychologically a process that we have agreed to call an activity proper? We cannot say immediately, because the psychological character of the process requires us to say what it represents for the subject himself. And to do that we already need a psychological analysis of the process itself.

Let us assume that our student's comrade came to him and told him that the book he was reading was not necessary at all for the examination. The following might then happen: the student would either immediately lay the book aside or continue to read it, or perhaps he would give up reading it reluctantly, with regret. In the last two cases it is obvious that what had directed the reading process, i.e. the content of the book, had in itself stimulated the reading, had been the motive. In other words some special need of the student's had found satisfaction in mastering its content – a need to know, to understand, to comprehend that which the book was about.

The first case is another matter. If our student, on learning that the content of the book was not in the syllabus of the test, readily stops reading it, it is clear that the motive inducing him to read it was not the content of the book *per se* but only the need to pass the examination. What his reading was directed to did not coincide with what induced him to

read. In this case, consequently, the reading was not properly an activity. The activity here was preparing for the examination and not the reading of the book *per se*.

Another important psychological feature of an activity is that a special class of psychic experiences – emotions and feelings – is specifically linked with it. These experiences do not depend on separate, particular processes but are always governed by the object, course, and outcome of the activity they form part of. The feeling with which I walk along the street, for example, is not determined by my walking, and not even by the external conditions I have been forced to go out in, or whether I shall encounter some obstacle in my way, but depends on what vital relation is involved in my action. In one case, therefore, I may walk happily in cold rain, and in another grow inwardly numb in good weather; in one case a hold-up en route puts me in despair, in the other even an unforeseen obstacle forcing me to return home can make me inwardly happy.

We distinguish the process we call action from activity. An act or action is a process whose motive does not coincide with its object (i.e. with what it is directed to), but lies in the activity of which it forms part. In the case of reading cited above, when it is continued only until the student realises it is not necessary for passing the examination, the reading is precisely an action. For what it is directed to *per se* (mastery of the book's content) is not its motive, is not what induced the student to read it, but rather the need to pass the examination.

Because the object of an action does not itself prompt to act, it is necessary for action to arise and to be accomplishable, for its object to appear to the subject in its relation to the motive of the activity of which it forms part. This relation is also reflected by the subject, moreover, in a quite definite form, namely in the form of awareness of the object of the action as a goal. The object of an action is therefore nothing other than its recognised direct goal. (In our example the aim of reading the book is to master its content, and that direct goal has a certain relationship to the motive of the activity, i.e. to passing the examination.)

There is a particular relation between activity and action. The motive of activity, by being shifted, may pass to the object (goal) of the action, with the result that the action is transformed into an activity. This is an exceptionally important point. This is the way new activities and new relations with reality arise. This process is precisely the concrete, psychological basis on which changes in the leading activity occur and consequently the transitions from one stage of development to another.

What does the psychological 'mechanism' of this process consist in?

To explain that let us first pose the general question of the genesis of new motives, and only then that of the transition to motives creating a new leading activity. Let us turn to the analysis of a concrete example.

Assume that a pupil in the first class cannot be made to do its lessons. It tries to put off preparing them in every way, and is distracted by extraneous things almost as soon as it has begun. Does it understand, does it know, that it has to prepare the lesson, that otherwise it will get a bad mark, that that will vex its parents, and finally that it is its obligation in general, its duty, to study, and that unless it does so it will never become a really useful person for its country, etc., etc.? A well developed child knows all that, of course; nevertheless it is not enough to make it do its lessons.

Suppose now that the child is told: 'You won't go out to play until you've done your lessons.' Let us assume that that does the trick and that the child does the homework it was set.

In this case we observe the following state of affairs: the child wants to get a good mark and wants to do its duty. These motives indisputably exist in its consciousness, but are not psychologically effective; another motive, however, is really effective, namely to get permission to go out and play.

Let us call the first type of motive 'only understandable motives' and the second kind 'really effective motives'.¹ Bearing this distinction in mind, we can now advance the following proposition: 'only understandable motives' become effective ones in certain conditions, and that is how new motives arise and consequently new types of activity.

The child begins to do its homework under the influence of a motive that we have created specially for it, but a week or two pass and we see that it itself already sits down to its homework of its own volition. Once, while copying something out, it suddenly stops and leaves the table, crying. 'Why have you stopped working?' it is asked. 'What's the good,' it explains, 'I'll just get a pass or a bad mark; I've written very untidily.'

This case reveals a new effective motive for its homework. It is doing its lessons now because it wants to get a good mark. And it is in just that that the true sense of the copying out consists for it, or the solving of a problem, or the performance of other study acts.

The really effective motive inducing the child to do its homework now is a motive that was previously 'only understandable' for it.

How does this transformation of motive come about? The question can be simply answered. It is a matter of an action's result being more significant, in certain conditions, than the motive that actually induces it. The child begins doing its homework conscientiously because it wants to go out quickly and play. In the end this leads to much more; not simply that it will get the chance to go and play but also that it will get a good mark. A new 'objectivation' of its needs comes about, which means that they are understood at a higher level.²

The transition to a new leading activity differs from the process described simply in the really effective motives becoming, in the case of a change of leading activity, those 'understandable motives' that exist in the sphere of relations characterising the place the child can occupy only in the next, higher stage of development, rather than in the sphere of relations in which it still actually is. The preparation of these transitions therefore takes a long time, because it is necessary for the child to become quite fully aware of a sphere of relations that are new for it.

In cases when the development of a new motive does not correspond to the real possibilities of the child's activity, this activity may not arise as a leading one, and initially, i.e. at this stage, will develop along a secondary line, as it were.

Let us assume, for example, that a preschool child masters dramatising in the course of play and then takes part in a children's fête to which its parents and other adults are invited. Let us also assume that the result of its creation has a certain success. If the child understands this success as related to the result of its actions, it begins to aspire to objective productiveness of its activity. Its creation, previously governed by play motives, now begins to develop as a special activity already distinguished from play. But the child may still not become an artiste, however. The shaping of this new activity, productive in character, there-

1 A similar distinction was made by Myasishev (1936). In adopting it, however, we introduce a rather different nuance and therefore also employ different terms.

2 Does the art of upbringing and education not consist in general in creating a proper combination of 'understandable' and 'really effective' motives, and at the same time in knowing how, in good time, to attach greater significance to the successful result of activity so as to ensure a transition to a higher type of the real motives governing the individual's life?

fore has no significance in its life, the lights of the fête are extinguished and the child's success in dramatising no longer evokes the old attitude of those around; so no shifts take place in its activity, and a new leading activity does not arise on this basis.

It is quite different when study is converted in like manner into independent activity. This activity, which has a new type of motivation and corresponds to the child's real potentialities, is now stabilised. It determines the child's life relations in a stable way and, developing at an intensified rate under the influence of the school, outstrips the development of the child's other types of activity. The child's new acquisitions and its new psychological processes therefore arise for the first time in precisely this activity, which means that it begins to play the role of a leading activity.

3

A change in leading activity provides the basis for further changes characterising the development of the child's psyche.

What are these changes?

First of all, let us touch on the changes in the psychological character of actions.

For an action to arise it is necessary for its object (direct aim) to be cognised in its relation with the motive of the activity of which it forms part. That is an extremely important point. It follows from it that the aim of one and the same act can be cognised differently, depending on what motive precisely it arises in connection with. The sense of the action thus also changes for the subject.

Let us clarify that with an example.

Assume that a child is occupied in doing its homework and is solving a problem set it. It is conscious of the aim of this action, of course, which is, for it, to find the required answer and to write it down. And its action is directed precisely to that. But how is the aim recognised, i.e. what sense does this action have for the child? To answer that we must know what activity of the child's the action forms part of or, what is the same thing, what the action's motive is. It may be that the motive here is to learn arithmetic; it may be not to make the teacher angry; and finally, perhaps, it is to get a chance to go play with comrades. Objectively the aim in all these cases remains the same, to solve the given problem. But its sense for the child will be different each time, so that its actions themselves will, of course, be psychologically different.

Depending on what activity the action forms part of, it will have one psychological character or another. That is a basic law of the development process of actions.

Let us take the following example. A preschool child answers a question put to it, and a first-year schoolchild answers the same question put to it by its teacher. With an answer of the same content, how different, however, their speech may be! Where is the child's old naturalness of speech? The classroom answer is an act that is not motivated by the teacher's needing to be told about something, or by sharing something with her. It includes a new relation and realises another activity, that of learning.

The teacher asks: 'How many windows are there here, in the classroom?' And she herself looks at the windows. All the same it is necessary to say: 'There are three windows.' One must say that a forest is depicted in a picture, though both the teacher and the whole class can see that it is a forest. 'For the teacher does not ask questions just to make conversation' – that is how a first-year pupil explained the psychological situation arising in a lesson. And that is just it; it is 'not for talk'. And therefore the child's speech in a lesson is structured differently psychologically than its speech in play and in its verbal contacts with schoolfellows, parents, etc.

The child's awareness, i.e. its interpretation, of the phenomena of reality equally occurs in connection with its activity. At each stage of its development it is limited by the round of its activity, which depends in turn on the leading relation and the leading activity, which is precisely why it also characterises this stage as a whole.

That statement calls for a certain clarification. It is a matter here precisely of awareness, i.e. of what personal sense a phenomenon has for the child, and not of its knowledge of the phenomenon. To explain that I shall employ an example I have already used elsewhere. One may know some historical event quite well, and very well understand the significance of some historical date, but this date may at the same time have a different sense for a person – one for a youth who has not yet quit the school form, another for the same youth who is fighting on the battlefield, ready, if necessary, to lay down his life for it. Has his knowledge of this event, of this historical date, changed or been increased? Not at all. It may even be a little less distinct, something perhaps even forgotten. But for some reason he has remembered this event, it has come to mind, and it turns out that another light has been thrown on it in his mind, and its content has been more fully disclosed as it were. It has become different, but not from the aspect of knowledge of it but from the angle of its sense for the individual; it has acquired a new sense. A truly meaningful and not formal description of a child's psychological development therefore cannot be abstracted from the development of its actual attitude to the world and from the content of its relations; the description must start precisely with an analysis of these relations and attitudes, because it is impossible otherwise to understand the features of the child's consciousness.

The justice of that will be readily seen, for example, if we try to give a psychological description of seven-year-old children going to school for the first time. What strikes the psychologist's eye here? An unusually marked difference between the children if he regards the processes of their upbringing and thinking abstractly, especially their speech. But the psychological image of a seven-year-old – the truly general one that characterises a child of seven – is not just created by these processes taken separately, but also by the psychological features of their activity in school, the attitude to the teacher, lessons, and classmates, typical of them, and hence also already only what characterises the separate partial processes of psychic life, i.e. how the children perceive the study material, how they understand explanations, how they structure their speech when answering the teacher, and so on.

Thus any conscious act is moulded within an established round of relations, within some activity or other that also determines its psychological peculiarity.

Let us turn to the next group of changes observed during a child's development, namely changes in the field of operations.

By operations we mean the mode of performing an act. An operation is the necessary content of any action but it is not identical with the latter. One and the same action may be performed by different operations, and conversely, one and the same operation may sometimes realise different actions. That is because an operation depends on the conditions in which the action's goal is given, while an action is determined by the goal. If we take a quite simple example, we can clarify this in the following way: let us assume that I have conceived the aim of memorising verses; my action will then consist in my active memorising of them. But how shall I do this, however? In one case, for example if I am sitting at home at the time, I will prefer, perhaps, to write them down; in other conditions I will resort to repeating them to myself. In both cases the action will be memorising, but the means of doing it, i.e. the operations of memorising, will be different.

More precisely, the operation is determined by the task, i.e. the goal, given in conditions requiring a certain mode of action.

Let us consider only one type of operation, viz., conscious operations.

For conscious operations to develop it is typical (as experimental studies have shown) that they are formed first as actions, and cannot otherwise arise. Conscious operations are formed at first as goal-directed processes that only later may acquire the form, in some cases, of an automatic habit.

How then is an action converted into an operation, and consequently into a skill and habit? To convert a child's action into an operation, the child has to be presented with a new aim with which its given action will become the means of performing another action. In other words, what was the goal of the given action must be converted into a condition of the action required by the new aim.

Let us take an example. When a novice hits the target during practice on a rifle range, he performs a definite act. What are its features? First of all, in the activity it forms part of, in what its motive is, and consequently in what sense it has for him. But it is also characterised by something else, by the means and techniques by which it is performed. Aimed shooting calls for a host of processes, each of which meets certain conditions of the action. It is necessary to put the body into a certain position, to hold the rifle's foresight strictly upright, to take aim properly, to press the butt into the shoulder, to hold the breath, and to squeeze the trigger quickly to the initial release point, and gradually to increase the finger's pressure on it.

In the trained marksman none of these processes is an independent action. The goals corresponding to them are not differentiated each time in his consciousness. In his consciousness there is only one goal, to hit the target. This also means that he has fully mastered the knack of shooting and the motor operations required for it.

It is quite different with one who is only just learning to shoot. He must first learn to hold the rifle properly, and to make that his goal; his action consists in that. Then his next action is to take aim, and so on.

By tracing the process of learning to shoot as a whole, we can very readily see the basic laws of the connection between operations and action.

First of all, it proves that it is actually impossible to teach any separate technique, i.e. any shooting operation, without first making it a special purposeful process for the novice, namely an action. Later, it becomes clear, as well, how to convert this action into an operation. After the novice has learned, for example, to squeeze the trigger smoothly, he is given a new task, to fire at the target. Now the aim in his consciousness is not 'to squeeze the trigger smoothly' but another one, to 'hit the target'. Smoothness in pressing the trigger is now only one of the conditions of the action required by this goal.

It is essential, moreover, to note that the previous, necessarily conscious moments of holding the rifle properly, pressing the trigger, etc. have now stopped being done consciously. But that does not mean at all that the marksman does not also perceive them. It is, of course, not at all so. He not only continues to perceive all these moments (e.g. the relation of the sights, the pressure of the rifle butt against his shoulder, etc.) but his movements continue to be controlled by their perception. At any moment he may also become conscious of them, so that an impression is also created that they are psychically reflected in exactly the same way as the goal of the action.

This link between action and operations, demonstrated by the example of motor movements, also holds for mental operations and their reinforcement in the form of mental habits. Addition, for example, can be both an action and an operation. To begin with, a child masters it as a definite operation, the means for which (i.e. the operation) is counting

by ones. But later it is given problems whose conditions require numbers to be added ('to find out so and so it is necessary to add such and such numbers'). The child's mental action must then become the solution of a problem and not just addition; the addition becomes an operation and must therefore acquire the form of an adequately developed and automatic habit.

So far, in speaking of the development of operations, we have mainly stressed one aspect, viz., their formation in the course of an action and their dependence on an action. But, as will already have been seen from the examples given, there is also another link between the development of operations and of actions; when the level of development of operations is high enough it becomes possible to pass to the performance of more complicated actions, and these more complicated actions in turn may provide the basis for new operations preparing the possibility for new actions, and so on.³

The last group of changes during the psyche's development on which we shall touch is those in psychophysiological functions.

By this term we mean physiological functions that realise the higher form of the organism's life, i.e. its life mediated by psychic reflection of reality. The group includes sensory functions, the mnemonic function, tonic function, and so on.

No psychic activity can be performed without involvement of these functions, but it does not consist solely in them and cannot be derived from them.

All these functions constitute the basis, as well, of the corresponding subjective phenomena of consciousness, viz., sensations, emotional experiences, sensory phenomena, and memory, which form the subjective 'matter of consciousness', as it were, the sensual richness, the polychromism and plasticity of the picture of the world in man's consciousness.

If we mentally exclude the function of colour perception, the image of reality in our consciousness will acquire the paleness of a black-and-white photograph. If we block our hearing our picture of the world will be as poor as a silent film is compared with a sound one. On the other hand, however, a blind person can become a scientist and create a new, more perfect theory of the nature of light, although he can experience light sensually just as little as an ordinary person can sense the velocity of light. This signifies that, although sense phenomena and concepts, meanings are interrelated, psychologically they are different categories of consciousness.

What does the development of functions consist in, in their connection with the processes of reality? As research has indicated, any function develops and is restructured within the process that it realises. Sensations, for example, develop in connection with the development of processes of goal-directed perception. That is why they can be actively cultivated in a child, and their cultivation cannot, moreover, by virtue of that, consist in simple, mechanical training of them, in formal exercises.

We now have a considerable number of experimental findings at our disposal, obtained by various workers, that undoubtedly demonstrate the dependence of the development of functions on the concrete process in which they are involved.⁴ Our own research has made it possible to make that more precise and to establish that shifts in the development of functions occur only when the function has a definite place in activity, namely if it is so in-

³ We ignore the question here of the inner link between mental operations and the categories of consciousness (i.e. meanings and concepts) corresponding to them. The complexity of this problem calls for special consideration.

⁴ See: B. M. Teplov. Capacities and Talent. In: *Uchbnye zapiski instituta psikhologii*, 1941, Vol. 2.

cluded in an operation that a certain level of its development becomes necessary for performance of the corresponding action. In that case the limits of possibility of shifts, in particular in the field of sensory functions, i.e. sensitivity, proves to be extremely wide, so that the 'normal' values of thresholds established by classical psychophysics may be considerably surpassed. When visual estimation is being investigated, for example, a shift toward a lowering of established average thresholds of more than two-thirds was obtained in these conditions; in investigations of variations in the threshold of estimating weight, the shift was more than half, and so on. And our findings are by no means the limit.

When we pass from these laboratory facts, obtained with adults, to examination of the facts of children's development, the forming of what is called phonematic hearing in a child can serve as an adequate illustration of what has been said. During its development a child as we know acquires a capacity to differentiate phonemes extremely finely, i.e. the meaningful sounds of the language, but just because their differentiation is a necessary condition for distinguishing between words that are similar in sound but different in meaning. The distinguishing of sounds whose differences are not a real means for the child to distinguish between words by meaning remains much less perfect. Later, consequently, when it begins to study a foreign language, it does not at first hear the difference at all between similar phonemes that are new to it, like the difference, for example, between the French vowel sound in *mais* and *mes*. It is remarkable, moreover, that it is not enough, in order to become sensitive to this difference, to listen to spoken French often, without trying, however, to master it. That is why it is possible to spend many years among people speaking another language and to remain deaf all the same to the nuances of its phonetics.

There is also a reverse connection between the development of functions and that of activity; the development of functions in turn makes it possible to perform the corresponding activity better. A fine distinction between shades of colour, for instance, is often the result of undertaking such an activity as embroidery, but it in turn facilitates an even finer choice of colour for embroidery, i.e. makes it possible to perform this activity better.

The development of a child's psychophysiological functions is thus also naturally connected with the general course of its activity's development.

4

To conclude our essay we shall touch on the general dynamics of the development of a child's psychic life and once again summarise certain basic propositions that we have put forward.

Let us first picture the changes as a whole that characterise a child's psychic development within the limits of a stage.

The first and most general point that can be advanced here is that the changes observed in the processes of a child's psychic life within the limits of each stage do not occur independently of one another but are internally linked with each other. In other words, they are not independent lines of development of separate processes (perception, memory, thinking, etc.). Although these lines of development can also be separated, it is impossible, when analysing them to find the relations directly that foster their development: The development of memory, for example, of course forms a connected series of changes, but their necessity is not determined by the relations arising within the development of memory itself, but by relations that depend on the place memory occupies in the child's activity at a given stage of its development.

At the stage of preschool childhood, for instance, one change in memory is that volitional remembering and recall are formed in a child. The preceding development of

memory is a necessary precondition for this change to be possible, but it is not determined by it; rather it is determined by special goals – to remember, to recall – being differentiated in the child's consciousness. In that connection the place of memory processes in the child's psychic life is altered. Before memory emerged only as a function serving some one process; now remembering becomes a special, purposeful process, an inner action, occupying a new place in the structure of the child's activity.

We observed this conversion of remembering and recall into a special action in our special experiments with preschool children.

During a group game, the child performing the 'liaison' role had to transmit a message to 'H.Q.' consisting always of the same initial sentence and several suitably selected names of different objects (each time different, of course).

The smallest children who took on the liaison role did not understand its inner content. Their role appeared to them solely in its external, procedural aspect, viz., to run to 'H.Q.', to salute, etc. The inner procedural aspect, however, i.e. the ensuring of contact, transmission of the message, etc. did not seem to exist for them. More often than not they therefore ran off every time to carry out the mission without even hearing it out.

Other children also accepted the inner procedural content of the role. They were also anxious really to pass on the message, but at first did not single out the aim of memorising its content. Their behaviour therefore also presented a peculiar picture; they listened to the assignment but clearly did nothing in order to remember it. In passing the message on they did not make any active attempt to recall what they had forgotten. And when asked what else there was to pass on, they usually answered: 'Nothing. That's all.'

The older children behaved differently. They not only listened to the message but also tried to memorise it. This was sometimes expressed in their moving their lips while listening to the message, or in repeating it to themselves on the way to 'H.Q.' If an attempt was made to speak to them while they were running with the message, they shook their heads and hurried on their way. In transmitting the message these children did not simply 'blurt' it out, but tried to recall what they had forgotten: 'Now I'll tell you more ... now ...' They were evidently doing something internally, were trying to find what was necessary somehow in their memory. Their inner activity was also directed to a definite aim in this case, viz., to remember the content of the message.

Such were the initial facts. The experiment proper consisted in trying to single out a special goal in their consciousness, viz., to remember, by putting special demands on subjects who were unable to remember actively, and by giving them supplementary instructions and so stimulating them to volitional remembering.

It proved necessary, for the aim of remembering to arise subjectively before a child, for the activity that included the corresponding objective task to acquire a motive that could communicate a sense of remembering to the child. In the experiments described this was achieved by passing from a motive that consisted in mastering the external aspect of a role, to one of mastering its inner content. A simple request to the child to 'try and remember' did not change anything in this aspect of its behaviour.

In this case we observed the genesis of remembering as an action during the development of play activity, but it could, of course, have taken shape in some other activity of the child's.

The last point that we would note in connection with the findings of our research relates to the conversion of remembering, as a volitional, conscious act into a conscious operation.

We found that the process of transforming a mental act difficult for a child, i.e. remembering, into an operation did not begin immediately by any means and that it was sometimes only completed with the transition to school education.

How is that to be explained?

An action, on being converted into an operation, is reduced as it were in the rank it occupies in the general structure of activity, but that does not mean that it is simplified. In becoming an operation it falls out of the round of conscient processes, but retains the general features of a conscious process, and at any moment, for example with a difficulty, may again become conscious. That is also the explanation of why, when we are dealing with the development of processes that are new in form (and such is volitional remembering in pre-school childhood), a quite long transition is observed characterised by the process's existing as an action but not as an operation. Therefore, when a child is given a special goal – to remember – the memorising and correspondingly the recall have the character of a volitional, controlled process for it. When this goal is not singled out, but is overshadowed by another one being posed at the same time, memory will again acquire features of involuntariness.

In this respect observations of the memory of seven-year-old schoolchildren are very much to the point; at the beginning of their school life they often 'forget' what they have been set, i.e. are unable voluntarily to remember it at the required moment. The specific tendency of children in their first days in the classroom leads to the special objective, viz., to remember the lesson, easily slipping from their memory, while volitional remembering in the form of an operation, i.e. 'secondary' volitional memory (by analogy with the commonly used term 'secondary, volitional attention'), still does not exist in many children of this age. As a result it happens that a child is wholly concentrated, on the one hand, on the school's demands (who does not know how solemnly the new pupil relates to the teacher's instructions, and to what an extent these are unquestionable for it), and on the other hand cannot remember what it has been set to do.

Everything we have said gives grounds for characterising the general picture of the development of the separate processes in a child's psychic life within a stage as follows. The development of the leading activity that characterises a given stage, and the development of other forms of the child's activity connected with it, determine the singling out of new goals in its consciousness and the forming of new actions answering to them. Because the subsequent development of these actions is limited by the operations already mastered by the child, and by the already existing level of development of its psychophysiological functions, a certain discrepancy arises between the two that is resolved by a 'tightening up' of the operations and functions to the level demanded by the development of new actions. Play of the preschool type, the role game, is thus originally limited almost exclusively to outward actions performed by motor operations prepared by play, i.e. by manipulation in pre-preschool childhood. But the new, preschool type of play and the content of the new actions that are developed in it demand quite different means of realising it. They are also, in fact, formed extremely quickly ('on the hop', as is often said); in particular, inner mental operations are quickly formed in the child at this time.

The course of changes within stages as a whole thus takes two counter directions, figuratively speaking. Their main, decisive direction is from initial changes in the round of the child's life relations and the round of its activity to the development of actions, operations, and functions. The other direction is that from a secondarily arising reconstruction of functions and operations to the development of a given round of the child's activity. Within a stage the course of the changes leading in this direction is limited by the demands of the

circle of activity that characterises the given stage. Crossing of the boundary already signifies the transition to another, higher stage of psychic development.

Interstadial transitions are characterised by opposing features. The relations into which the child enters with the world around it are, by their nature, social relations, for it is precisely society that constitutes the actual, primary condition of its life, determining both its content and its motivation. Every one of a child's activities therefore does not simply express its relation with objective reality; existing social relations are also expressed objectively in each of its activities.

A child is finally transformed, in developing, into a member of society bearing all the obligations that society puts upon it. The successive stages of its development are also nothing else than the separate stages of this transformation.

The child does not only actually change its place in the system of social relations, however; it also becomes conscious of these relations and interprets them. The development of its consciousness finds expression in a change in the motivation of its activity; old motives lose their stimulating force and new ones are born leading to a reinterpretation of its former actions. The activity that used to play the leading role begins to be shed and pushed into the background. A new leading activity arises, and with it a new stage of development also begins. These transitions, in contrast to intrastadial changes, go further, viz., from changes in actions, operations, and functions to changes in activity as a whole.

Whatever particular process of a child's psychic life we take, analysis of the motive forces of its development thus inevitably leads us to the main forms of its activity, to the motives encouraging them, and consequently to what sense the child is discovering in the objects and phenomena of the world around it. From that aspect the content of a child's psychic development also consists precisely in the place of particular psychic processes in its activity being altered; and the features of it that these particular processes acquire at the different stages of development depend on that. In conclusion we must stress the following point: we have been able to survey psychic development in this essay only from the procedural aspect, so to speak, of the psyche, almost entirely omitting the most important question of the inner interconnections of the changes in activity with the development of the picture or image of the world in the child's consciousness, and with the change in the structure of its consciousness. Interpretation of that issue requires a preliminary exposition of the psychological problem of the unity of development of sensory contents, consciousness, and those categories of consciousness that are at variance with one another, which we render by the terms 'meaning' and 'sense'. We do not have the space here to go into this matter.