The problem of stages* (2) in the mental development of the child is the fundamental problem of child psychology. The elaboration of this problem has important theoretical significance since it is by determining the stages of mental development and by discovering the patterns of transition from one stage to the next that psychology eventually will solve the problem of the motive forces of mental development. We contend that every conception of the motive forces of mental development must first of all be tested on the "proving grounds" of theory of developmental stages.

The correct solution of the problem of developmental periods will in large measure determine the strategy employed in constructing a comprehensive educational system for the coming generation in our country. The practical significance of this problem will increase as we approach the point when we must elaborate the principles for a unified public system of education encompassing the entire period of childhood. We must emphasize the fact that the construction of such a system in compliance with the laws of developmental stages of childhood is possible only within a socialist society; for it is only in such a society that has a maximum interest in the full and harmonious development of the abilities of every one of its members and, consequently, in the fullest possible use of the potential of each developmental stage.

At the present time Soviet child psychology is guided by a conception of developmental stages based on the existing system of childhood education and upbringing. The processes (3) of mental development are intimately connected with the child's education and upbringing; at the same time, the organization and structure of our educational system are themselves based on vast practical experience. It is natural that the division of childhood into stages for the aims and objectives of pedagogy approximates rather closely the real pattern. However, they do not coincide. Most importantly, this breakdown can in no way provide a solution to the question of the motive forces in child's development, or to the patterns of transition from one stage to the
next. The changes taking place in the course of education and upbringing reveal that the "pedagogical division of stages" lacks a sufficiently firm theoretical foundation and is unable to answer a number of essential practical questions; for example, when school education should begin, what special features education should exhibit at the time of a transition to a new stage, and so forth). Thus the existing concept of developmental stages is approaching a crisis. During the 1930s the question of developmental stages received great deal of attention from P. P. Blonskiy (4) and L. S. Vygotsky, who thereby laid the foundations for the development of child psychology in the Soviet Union. Unfortunately, we have done no fundamental work on this problem since that time.

P. Blonskiy pointed to the fact that the processes of mental development are subject to historical change; he specifically pointed out how new stages of childhood have emerged over the course of history. He wrote:

Modern man, under social conditions favorable for his development, develops further and more rapidly than the human being of earlier historical epochs. Hence childhood is not an eternal, immutable phenomenon: it is different at each different stage of evolution in the animal world, and it is different also at each different stage of mankind's own historical development. The more favorable the economic and cultural conditions of development, the faster its pace. In a communist society children will develop faster and will of course be much more developed than today's children at the same age ([1], p. 326).

Blonskiy continues:

At the same time, we see that even youth (that is, the continuation of growth after puberty) is by no means a universal human characteristic: In the case of nations or social groups living under unfavourable conditions, growth and development cease at puberty. Thus youth has not been an eternal phenomenon; rather, it constitutes a late acquisition of mankind - indeed, one appearing almost exclusively within the historical epoch ([1], p. 326).

Blonskiy was an opponent of purely evolutionary notions about the course of child development. He considered child development to be primarily a process of qualitative transformations accompanied by sudden breaks and leaps. He wrote that "these changes may occur in the form of sharp crises, or they may take place gradually, almost imperceptibly. Let us agree to call those times in a child's life that are distinguished from one another by larger or smaller crises "periods" and "stages," respectively. Further, let us designate those times in a child's life that only flow into one another as "phases." (5) ([2], p.7).

In the last years of his life, L. S. Vygotsky was in the process of writing a major work (6) on child psychology. Although some chapters did achieve finished form, others have been preserved only as outlines or notes on reading material, Vygotsky himself prepared for publication the chapter entitled "The Problem of Age," which presents certain general implications and a theoretical analysis of the then existing materials - both Soviet and foreign - on the problem of stages of child mental development. Vygotsky wrote:

We may provisionally define psychological age as a specific epoch, cycle, or stage of development, as a definite, relatively self-contained period of development whose significance is determined by its place in the general developmental cycle and within each of which the general laws of development are expressed in a qualitatively distinct fashion. In this sense we might compare age-levels in child development with the historical ages or eras in the development of mankind, with the evolutionary epochs in the development of organic life, or with geological epochs in the history
of the earth's development. In the transition from one age-level to another we find the emergence of new structures that were absent in earlier periods; we can see a reorganization and alteration of the very course of development. Thus the development of the child is but a continuous transition from one age-level to another, accompanied by developmental changes in the child's personality. The study of child development is the study of the child's transition from one age-level to another and the change in his personality within each age-period as these changes occur under concrete socio-historical conditions ([5], p. 6). (7)(8)

"We already know," Vygotsky continues, "where the material foundations (9) of a theory of age periods in childhood are to be sought. Only internal changes in the course of development itself, only sharp breaks and turning points during development, can give us a reliable foundation for determining those basic epochs in the formation of the child's personality that we call 'ages' "([5], p. 23). (10)

Vygotsky concludes his description of the basic features of transitional periods in development as follows:

"Thus we see unveiled before us a perfectly regular and distinct pattern, full of the most profound meaning. Ages of stability are interrupted by ages of crisis (11). And these latter are the breaks and turning points in development, again confirming the thesis that the development of the child is a dialectical process, a process in which the transition from one stage to the next occurs not through evolution, but through revolution. Even if ages of crisis had not been discovered empirically, a theoretical analysis alone would have necessitated the inclusion of this concept in any scheme of development. As it is, theory is left only with the task of acknowledging and interpreting what has already been established through empirical investigation." ([5], p. 34) (12).

It is our view that Blonskiy's and Vygotsky's approaches to the problem of developmental stages must be maintained, but should be further developed in the light of present day knowledge concerning the mental development of the child. This would entail the following: first, a historical approach to the rate of development and to the question of the emergence of distinct stages (13) of childhood in the course of the historical development of mankind; second, an approach to each age stage from the point of view of the position it occupies in the general cycle of the child's mental development; third, a concept of mental development as a dialectically contradictory process, a process that proceeds not along an evolutionary path, but along a path marked by breaks in continuity and the emergence of qualitatively new structures in the course of development; fourth, the discrimination (14) of critical points in mental development as necessary and requisite turning points and the recognition of these critical points as important objective criteria of the transitions from one period to the next; and fifth, the discrimination (15) of qualitatively different stages (16) and, in connection with that, distinguishing among "periods," "stages," and "phases" in mental development.

Blonskiy and Vygotskiy were never able to put their principles of developmental stages to work, owing to the absence of conditions for solving the problem of the motive forces of children's mental development. In the 1930s the answer to that problem revolved around developmental factors, around the question of the relative roles of environment and heredity in mental development. Although both investigators tried to find a way out of the impasse created by the theory of "developmental factors," although they saw its methodological and practical scientific shortcomings, and although Vygotsky laid the groundwork for the elaboration of the problem of
learning and development, none of their theoretical research led to a solution to the problem. This, in turn, impeded any special study of the problem of developmental stages.

One of the important achievements of Soviet psychology in the late 1930s was its introduction of the concept of activity into research on the genesis and development of the mind and consciousness (through the investigations of A. N. Leont'ev and S. L. Rubinshteyn). The result was a also in the principles for distinguishing its individual stages. And for the first time the solution to the problem of motive forces of children's mental development was found to have direct relevance to the question of the principles for distinguishing the specific stages in mental development.

This new notion was most clearly developed in the works of A. N. Leont'ev, who wrote:

"Thus, in studying the mental development of the child we must proceed from the development of his activity as that activity arises from the given, concrete conditions of the child's life. . . . Life or activity in general is not built up mechanically from the particular forms of activity. At a given stage some types of activity will be more prominent, and more significant for the further development of the personality; others, less so. Some types will play a leading role in development; others will play a minor role. That is why we should speak of the dependence of mental development not on activity in general, but on the dominant form of activity (17). In accordance with this we might say that each stage of mental development is characterized by one dominant relationship of the child to his environment, by one dominant activity within that given stage. The indication of a transition from one stage to another is precisely a shift in the dominant type of activity, the dominant relationship of the child to his surroundings." ([6], pp. 591, 592) (18)

The experimental investigations of A. N. Leont'ev, A. V. Zaporozhets, and their co-workers and the work of A. A. Smirnov, P. I. Zinchenko, and the followers of S. L. Rubinshteyn have demonstrated the dependence of the functional level of mental processes upon the nature of their involvement in this or that activity. In other words, mental processes (from elementary sensomotor processes to higher intellectual processes) are dependent on the motives and tasks of the activity in which they are involved; they are determined by the place they occupy in the structure of the activity (the action or operation). These facts have played an important role in the solution of a number of methodological problems in psychology.

Unfortunately, however, these new positions have not led to the elaboration of a corresponding theory of psychological development and developmental stages. In our opinion, the failure to develop such a theory is due to the fact that investigations of the psychological content of activity have neglected the objective-contextual aspect of activity, treating it as an aspect lying outside psychology. Attention has been devoted exclusively to the structure of activity, to the correlation of motives and tasks, actions and operations within activity. The solution to the problem of stages in mental development has also been restricted by the fact that we have studied only two types of activity directly related to mental development in childhood - play and learning. In fact, however, we can never understand the process of mental development without thoroughly investigating the objective-contextual aspect of activity, that is, without elucidating the question: With what particular aspects of reality does the child interact in performing this or that activity? (19).
Up until the present time our concepts of the mental development of the child have suffered principally from a radical separation of processes of intellectual development from those of personality development. One result of this separation is that personality development, bereft of firm foundations, becomes reduced to the development of the need-affective or the need-motivational sphere.

As early as the 1930's Vygotsky pointed to the necessity of viewing the development of affect and intellect as a dynamic unity. But since that time the development of a child's cognitive powers and the development of the need-affective sphere have been regarded as completely independent, though parallel, processes. In pedagogical theory and practice this notion is reflected in the dichotomy (20) between education, on the one hand, and upbringing, on the other.

Perhaps the clearest concept of an intellectual development divorced (21) from the development of the need-affective sphere is that contained in the theory of J. Piaget. It is Piaget who has offered the most complete concept of how each individual stage in cognitive development emerges directly from the preceding stage (to some extent or another, such a view of the child's intellectual development is characteristic of nearly all intellectualist theories of cognition). The principal shortcoming of this view lies in its inability to explain the transitions from one stage of intellectual development to the next. Why does the child proceed from the pre-operative stage to the concrete operational stage and then to the formal operational stage (Piaget's terms)? Why does the child advance from complex type thought to pre-conceptual thought, and finally to conceptual thought (Vygotsky's terms)? Why is there a transition from the stage of practical activity to the stage of images and then to the verbal-discursive stages (to use current terminology)? There is no clear-cut answer to these questions. And in the absence of such an answer the easiest way out is to allude either to "maturation" or to some other forces outside the actual process of mental development.

The development of the need-affective sphere - a development that, as we have already pointed out, is often identified with the development of personality - is viewed in an analogous fashion: its stages are arranged linearly, independent of cognitive development. Here, too, the result is that we are left with no explanation for the transition from one set of needs and motives for activity to another set.

Thus a peculiar dualism is read into mental development, which is then seen to follow two basic and parallel lines: the line of development of the need-motivational sphere and the line of development of the intellectual (cognitive) processes. It is this dualism and parallelism that we must overcome in order to understand the mental development of the child as a unitary process.

Underlying this dualism and parallelism is a naturalistic approach to the child's mental development, an approach that is characteristic of most foreign theories and one that, unfortunately, has not, yet been entirely eliminated from Soviet child psychology. Such an approach, first of all, views the child as an isolated individual for whom society is merely "an environing habitat" sui generis. Second, mental development is viewed merely as the process of adaptation to the conditions of life in society. Third, society is seen as the union of two mutually disjoint elements, a "world of things" and a "world of people," both of which are primordial elements of the given in this "environing habitat." Fourth, it is the development of two fundamentally distinct sets of adaptive mechanisms - for adaptation to the "world of things" and to the "world of people" - that constitutes mental development. (23).
Mental development, then, is viewed as the development of adaptive mechanisms within two mutually disjoint systems: the system of "child - things" and the system of "child - other people." It is precisely this view that has given rise to the notion of two independent lines of mental development. These, in turn, are the source of two theories: Piaget's theory of the intellect and cognitive development, and the theory of the need-affective sphere and its development as expounded by Sigmund Freud and the neo-Freudians. Despite differences in concrete psychological content, these conceptions are closely related in their basic interpretations of mental development as the development of adaptive mechanisms of behavior. For Piaget, the intellect is an adaptive mechanism, and its development is the development of forms of the child's adaptation to the "world of things." For Freud and the neo-Freudians, the mechanisms of substitution, censorship, displacement, etc., are mechanisms for the child's adaptation to the "world of people."

We should emphasize the fact that in viewing the adaptation of the child within the system of "child - things," the latter appear principally as physical objects with their spatial and physical properties. In viewing the adaptation of the child within the system of "child - other people," the latter appear as random individuals with their individual character traits, temperaments, etc. If things are viewed as physical objects and other people as random individuals, then the child's adaptation to these "two worlds" actually does seem to proceed along two parallel, fundamentally independent lines. (24).

Overcoming this approach is not an easy matter, primarily because, for the child, the surrounding reality appears in two forms. We encountered this division of the child's reality into a "world of things" and a "world of people" in our experimental investigations of the nature of role-playing in preschool-age children. In attempting to elucidate the question of the sensitivity of role playing to these two spheres of reality, we in some cases acquainted children with things, their properties and their purposes. For example, during a trip to the zoo, we would acquaint the children with the animals, their habitat, external appearance, and so forth. Although toy animals were placed in the children's nursery after the trip, role-playing did not develop. In other cases we would use such a trip to acquaint the children with the people who served on the zoo's staff, with their function stand interrelationships - with the cashier and the ticket-collector, with the guides, with the attendants who feed the animals, with the "wild animal doctor," and so on. After such a trip there was, as a rule, extended and interesting role-playing in which the children "modeled" the tasks of the adult's activity and the relations among the adults. Moreover, in these games the children's previously acquired knowledge about wild animals was given a context and meaning. The results of that investigation testified to the fact that role-playing is sensitive primarily to the "world of people" - it is in their play that children "model" the purposes and motives of human activity and the norms of human relations. In addition, the investigation showed that for the child the surrounding world actually does appear divided into two spheres and that there is a close link between the child's activities in both (although in this investigation we were unable to shed light on the specific features of that link).

III

Overcoming the naturalistic concept of mental development calls for a radically new approach to the interrelation between child and society. We have been led to this conclusion by a special
investigation of the historical emergence of role-playing. In contrast to the view that role playing is an eternal extra-historical phenomenon, we hypothesized that role playing emerged at a specific stage of social development, as the child's position in society changed in the course of history. Role-playing is an activity that is social in origin and, consequently, social in content.

This hypothesis concerning the historical origin of play is supported by a wealth of anthropological and ethnological material. This material demonstrates that role-playing emerges as the status of the child in society changed. The child's position in society has changed over the course of history, but at all times and places the child has been a part of society. In the early stages of mankind's development the link between the child and society was direct and immediate - from their very earliest years children lived a life in common with adults. The development of the child within this common life was a unified and integral process. The child constituted an organic part of the combined productive forces of the society, and his participation in it was limited only by his physical capacities.

As the means of production and as social relations grew more complex, the link between the child and society changed: this link, previously direct, now became mediated by education and the norms of upbringing. The system of "child - society," however, did not change, did not become a system of "child and society" (the conjunction "and" can, of course, imply contrast as well as combination). It would be more correct to speak of a system of the 'child in society.' In the process of social development the functions of education and upbringing came in increasing measure to be taken over by the family, which itself became an independent economic unit. At the same time, the ties between the family and society became more and more indirect. The set of relations characterizing the "child in society" thereby became obscured and concealed by the system of relations "child - family," and within that, by the relationships between "the child and the individual adult." (28)

If we look at the formation of personality in the system "child in society," we can see how the links in the systems "child- thing" and "child - individual adult" assume a radically different character. They change from two independent systems into one unified system. And, as a result, the content of each system is essentially changed. When we examine the system "child - thing" we now see that things, possessing definite physical and spatial, properties, appear to the child as social objects: it is the socially evolved modes of action with these objects that predominate.

The system "child - thing" is in reality the system "child - social object." Socially evolved modes of action with these objects are not given immediately as physical properties of the objects. We do not find inscribed on the object where and how it originated, how we may operate with it, how we can reproduce it. Therefore, that object cannot be mastered through adaptation, through a mere "accommodation" to its physical properties. This must take place internally; the child must go through a special process of learning the social modes of action with objects. In this process the physical properties of an object serve merely as referents for the child's orientation in his actions with that object. (30)

As the child learns the socially evolved modes of action with objects, he is being shaped into a member of society, by a process that includes his intellectual, cognitive, and social forces. For the child himself (as well as for adults directly involved in the organized process of education and upbringing), this development appears primarily as the expansion of his sphere of assimilation of activity with objects expands outward to include more actions, and upward to a
higher level of proficiency. It is in terms of these criteria that the child compares his own level and his own capabilities with those of adults and other children. In such a comparison the adult appears to the child not only as the bearer of social modes of action with objects but also as a person performing specific social tasks.

The distinctive features of the child's discovery of the human meaning of object actions [e.g., actions directed toward or involving the manipulation of objects - Ed.] have been shown in a number of investigations. For example, F. I. Fradkina [9] has described how, at a certain stage in the acquisition of object actions, the small child begins to compare his own actions with those of the adult. This is demonstrated by the child's calling himself simultaneously by two names, his own name and the name of an adult; For example, imitating the action of an adult reading a newspaper or writing, a boy might say "Misha - Daddy," or a little girl, dressing her doll for bed, might refer to "Vera - Mommy." L. S. Slavina [8] has shown in her investigations how the child, once he has discovered the human meaning of object actions, clings tenaciously to it, imparting that meaning to even the simplest manipulations.

These investigations were conducted on limited material concerning the development of object actions in very young children. But they do suggest that the child's acquisition of modes of action with objects lead him naturally to the adult as the bearer of the social aims of activity. It must be left to further investigation to determine the psychological mechanism of that transition in each concrete case and at each concrete stage of development.

The system "child - adult," in turn, also takes on a substantially different content. The adult no longer appears primarily as a collection of random and individual attributes, but as the bearer of certain types of social activity, as the performer of certain tasks, as one who exists in various relations to other people, and as a person who himself conforms to certain norms. But the ends and motives of an adult's activity are not outwardly visible from the activity itself. Outwardly, the child sees that activity as the transformation and production of objects. The ends and motives of an activity are revealed only as that activity is carried out to its finished, real form within the totality of social relations; but the child unable to see the activity in that context. Hence the need arises for a special process of learning the objectives and motives of human activity and the norms of human relations to which people conform as they act.

Unfortunately, the particular psychological features of that (learning) process have been inadequately investigated. Nevertheless, on the basis of what we know, we can offer the following hypothesis: the child learns the objectives, motives, and norms of the relations in adult activity by reproducing or imitating relations in his own activity, within the associations, and collectives to which he himself belongs. It is noting that in the learning process the child finds it necessary to learn new object actions that are required for performing adult activity. Thus the child sees the adult as the bearer of new and ever more complex modes of action with objects, of socially elaborated standards and norms that are necessary for orientation to the surrounding world.

Hence the child's activity within the systems "child - social object" and "child - social adult" represents a unitary process within which his personality is formed. In the course of historical development, however, this essentially unitary process of the child's life in society splits and
develops two aspects. This split creates the preconditions for hypertrophied development of either of the two sides. The school in a class society exploits this possibility by rearing certain children primarily as performers of the operational and technical aspects of labor while educating others chiefly as bearers of the objectives and motives of that activity. It is only a class-structured society that is characterized by such exploitations of the historically evolved split in the unitary process of the child's life and development in society.

IV

The theoretical ideas we have developed above are directly related to the problem of stages in the mental development of the child. Let us turn to the factual material accumulated in child psychology. From a multitude of investigations conducted in the last 20-30 years, we shall select those that have enriched our knowledge of the basic types of children's activity. Let us examine briefly the most important of these.

1. Until quite recently there was a great deal of uncertainty concerning the objective-contextual characteristics of infant activity. In particular, we were unclear as to which activity was dominant during this age. Some investigators (L. 1. Bozhovich and others) regarded the infant's need for external stimuli as primary. Consequently, the most important aspect of the child's activity was the development of orientative actions. Others, (Piaget and others) paid more attention to the development of sensomotor and manipulative activity. A third group (G. L. Rozengard-Pupko and others) emphasized the significance of the infants contact with adults.

In recent years, research conducted by M. I. Lisina and her associates has convincingly demonstrated that infants have a special form of activity for personal contact, activity that is directly emotional in nature. The animation that appears during the third month of the infant's life and that formally was considered a simple reaction to the adult (the strongest and most complex stimulus) is in reality a complex activity serving to produce contact with the adult and employing its own special means. It is important to note the fact that this action appears long before the child begins to manipulate objects or before the act of grasping has been perfect. After grasping and manipulatory activity performed together with an adult has been achieved, communicative acts of contact are not absorbed into the broader framework of joint activity; they do not merge in the course of practical interactions with adults, but retain their own specific content and means. These and other investigations have shown that a deficit of emotional contact (and in all likelihood, a surfeit of such contact) exerts a decisive influence on mental development in this period.

Thus, we can assume that direct emotional contact with the adult represents the dominant activity of the infant; it is against the background of this activity and within this activity that orienting, sensorimotor, and manipulative actions take form.

2. These same investigators established the child's transition - at the end of infancy - to object activity proper, i.e., to the acquisition of socially evolved modes of action involving objects. The learning of these actions is, of course, impossible without the participation of adults who demonstrate them to the child and perform them with him. The adult is merely one
element - albeit a chief element - within the situation of object activity. Immediate emotional contact with the adult recedes to a subordinate role; the dominant role is now taken over by strictly practical cooperation in the activity at hand. The child is absorbed in the object and his manipulations of it. A number of researchers have repeatedly called attention to how the child seems thus to be bound up within a field of his direct actions. It is at this point that we observe the emergence of "object fetishism": the child seems not to notice the adult, who is "hidden" by the object and its properties.

Many investigators, both Soviet and foreign, have shown that an intensive process of learning object and instrumental operations takes place during this period, when so called "practical intelligence" is formed. Moreover, detailed investigations of the genesis of intelligence in the child, conducted by Piaget and his associates, have shown that it is precisely during this period that sensorimotor development takes place, a development that prepares for the emergence of the symbolic functions.

We have already referred to the studies of F. I. Fradkina, which showed how, in the process of learning an action, the action seems to become detached from the object on which it was originally learned: the action is transferred to other objects that, although similar, are not identical to the original object. In this fashion, actions are generalized. F. I. Fradkina showed that it is precisely through the detachment of actions from objects and their generalization that it becomes possible for the child to compare his actions with that of the adult; in this way the child begins to gain access to the meaning and aims of human activity.

These findings indicate that the dominant activity in early childhood is precisely object-instrumental activity, in their course of which the child learns socially evolved modes of action with objects.

At first glance this appears to be contradicted by the fact that it is during this period that the child develops verbal forms of communication with adults. From a being without speech whose contact with adults is through emotions and mimicry, the child turns into a speaking being who employs a grammar and a relatively broad vocabulary. However, analysis of the child's verbal communication reveals that he uses speech primarily as a means of furthering cooperation with adults within the context of their joint object activity. In other words, it serves as a means of purely practical contact between child and adult. And what is more, we have reason to believe that object actions themselves, and the dexterity with which we perform them, are for the child a way of further cooperation with adults. These relations themselves are mediated by the child's object actions. Therefore, the intensive development of speech - if speech is seen as a means of a aiding cooperation with adults - does not contradict our contention that the dominant activity during this period is object activity, within which the child learns socially evolved modes of action with objects.

3. The work of Vygotsky, Leont'ev, and others has firmly established for Soviet psychology the fact that the dominant preschool activity is play in its most expanded form (role-playing). The significance of play in the mental development of the child at this age has many aspects. Its primary significance lies in the fact that in play the child imitates human actions in many ways, e.g., he assumes the role of the adult, the adult's functions and work in society; he
reproduces object actions by generalizing them in representational thought; transfers meaning from one object to another, etc.

An object action, taken in isolation, does not have "written on it" the answers to questions such as: Why was it performed? (75) What is its social meaning? Its actual motive? It is only when an object action becomes incorporated into a system of human relations that we can discover its true social meaning, its purposefulness as regards other people. This sort of "incorporation" also takes place in play (76). Role-playing is an activity within which the child becomes oriented toward the most universal, the most fundamental, meanings of human activity. On this basis the child begins to strive for socially meaningful and socially valuable activity, and in so doing demonstrates the key factor in readiness for school. (77) This is the chief significance of play for mental development; it is its dominant function.

4. In the early 1930s Vygotsky postulated that school instruction is the dominant element in the mental development of school-age children. Of course, not just any sort of instruction exerts such an influence on development: it is only "good instruction" that has such an effect. In ever increasing measure the quality of instruction is beginning to be judged by exactly how it influences the child's intellectual development. Psychologists have conducted a large number of experiments designed to determine how school instruction influences mental development. The limits of the present article do not permit us to examine all the different views. We will merely draw attention to the fact that a majority of investigators - however they may conceive of the inner mechanism of that influence and whatever significance they may ascribe (78) to the various aspects of instruction (content, method, organization) - agree that instruction is the dominant factor in the intellectual development of the child in early school age.

The activity of formal learning, (79) i.e., that activity through which the child acquires new knowledge and for which a system of instruction should provide proper guidance, is the dominant activity in this period. The intellectual and cognitive forces of the child are actively molded during the course of this process. The primacy of formal learning (80) is also reflected in the fact that is this activity that mediates the whole system of the child's relations with surrounding adults (down to personal contact (81) with family).

5. Distinguishing the dominant activity during adolescence presents greater difficulties. These difficulties are associated with the fact that, for the adolescent, the primary activity is still school studies. For adults, success or failure in school continues to serve as the principal criterion for evaluating adolescents. Moreover, under present educational condition the transition to adolescence is not accompanied by any substantial outward changes. Yet it is precisely the transition to the adolescent period that psychology has distinguished as the most critical.

In the absence of any changes in the general conditions of life and activity, it is natural that psychologists have sought the cause of the transition to adolescence in the changes in the organism itself, in the process of sexual maturation that occurs in this period. Sexual development does, of course, exert an influence on personality development during this period, but it is not the primary influence. Like other changes connected with the intellectual and physical growth of the child, puberty exerts its influence indirectly, through the child's relations with the surrounding world, and through his comparing himself with adults and other adolescence, i.e., only within the whole complex of changes that occur at this time.
A number of investigations have shown how, in the beginning of this period, a new sphere of life emerges. H. Wallon expressed this idea most clearly when he wrote: "When friendship and rivalry no longer are based on community or antagonism or tasks that are being, or remain to be, fulfilled; when friendship and rivalry seek to express a spiritual affinity or difference; when it seems that they have personal aspects and are not linked to practical cooperation or conflict - this indicates the arrival of sexual maturity." ([3], p. 194)

In recent years investigations conducted under D. B. El'konin and T. V. Dragunova have shown that a special activity emerges and develops in adolescence, an activity that consists in the establishment of intimate personal relations between adolescence. This activity has been termed the activity of social contact. (83) It differs from other interrelations that occur in practical cooperation between peers in that its principle content concerns another adolescent as a human being with definite personal qualities. In all forms of collected activity among adolescence we can observe how relations are subordinated to the "code of friendship." Interpersonal relations can be, and are, built on the basis not only of mutual respect but also of complete trust and a mutually shared private, inner world. This sphere of life shared in common among friends is particularly important in adolescence. The formation of the adolescent personality is greatly influenced by the formation of relations within the peer group, on the basis of the code of friendship. The code of friendship reproduces in its objective content the most universal norms of interrelations that hold for adults in society.

Social contact, then, is the specific form in which adult relationships are reproduced among adolescence, and the means by which adolescence becomes more thoroughly versed in the norms that guide adult society. Thus it is reasonable to assume that the dominant activity during this period is social contact, (85) the activity of building relations with friends on the basis of definite moral and ethical norms that mediate the actions of adolescence.

We can, however, go farther. Social contact, (86) built on complete trust and a private world shared in common, is the activity in which the child's most universal views of life are formed, his views on human relations, on his own future - in short, the personal meanings of life. (87) Thus we begin the formation of self-reflective awareness on the part of the child, his self consciousness as "social consciousness diverted inward" (Vygotsky). (88) This, in turn, permits the emergence of new motives and objectives that direct the child's own activity toward the future and along the channels of education and career.

We have been able only to survey briefly the most important facts concerning the objective-contextual characteristics of the dominant types of activity that have been thus far distinguished, on the basis of which we might separate all the types into two large groups.

The first group includes activities that are accompanied by an intensive orientation in the fundamental meanings of human activity and by the learning of the objectives, motives, and norms of human relations, i.e., activities within a system of "child-social adult." There are of course essential differences between the direct emotional contact of the infant, role playing in young children, and the intimate personal contact between adolescence - differences both in terms of concrete content and in terms of the depth of the child's penetration into the sphere of motives and objectives of adult activity. It is in fact these differences that allow us to picture the progression of different stages as a special sort of ladder for the progressive assimilation by the
child of the sphere of motives and objectives in activity. Nevertheless, these activities do have a common basic content: it is precisely this group of activities that the primary development of the need-motivational sphere takes place.

The second group consists of activities, by means of which the child acquires both socially evolved modes of action with objects and the standards that distinguish the various aspects of those objects, i.e., these are activities in the system "child-social object." Of course, these are essential differences among the elements of this group. The very young child's manipulation of objects bears little resemblance to the learning activity of the young schoolchild, and even less resemblance to the vocational and career-oriented activity of older adolescence. Indeed, what does mastering objective operations involving a spoon or glass have in common with mastering mathematics or grammar? Still they have one common feature: they are all elements of human culture. They have a common origin and a common place in the life of society; they all represent the result of a product of history. Through his learning of the socially evolved modes of action with objects, the child becomes more fully oriented within the objective world; his intellectual powers are shaped; he becomes a part of society's productive forces.

Here we should underscore one point: when we speak of the dominant activity and its significance for the child's development in this or that period, this is by no means meant to imply that the child might not be simultaneously developing in other directions as well. In each period, a child's life is many sided, and the activities of which his life is composed are varied. New sorts of activity appear; the child forms new relations with his surroundings. When a new activity becomes dominant, it does not cancel all previously existing activities: it merely alters their status within the overall system of relations between the child and his surroundings, which thereby becomes increasingly richer.

If we take the types of child activity that we have distinguished so far and arrange them in groups according to the order in which they become the dominant activity, we obtain the following series:

- Direct emotional contact
- Manipulation of objects
- Role playing
- Formal learning

(94) 1st group

(95) 2nd group
Thus, child development is composed, on the one hand, of periods characterized chiefly by the assimilation of the objectives, motives, and norms of human relations and, on that basis, by the development of the need-motivational sphere, and, on the other hand; of periods characterized chiefly by the acquisition of socially evolved modes of action with objects and, on that basis, the formation of the child's intellectual and cognitive powers, his operational and technical capabilities.

From what we have observed above we can formulate a hypothesis about the alternation of developmental periods: periods in which we see a predominant development of the child's need-motivational sphere alternate regularly with periods in which we observe the predominant development operational and technical capabilities.

A sizable body of material in Soviet and foreign psychology permits us to discriminate two sharp transitions in children's mental development. First, the transition from early childhood to preschool age, usually termed the three-year-old crisis, and, second, the transition from early school age to adolescence, commonly referred to as the puberty crisis. A comparison of the symptoms of these two transitions reveals a great similarity between them. In both periods the child manifests a tendency toward independence as well as a series of negative phenomena connected with his relations with adults. Inserting these critical transitions into the scheme of developmental periods in childhood we arrive at the general pattern of periods, stages, and phases shown in the figure opposite.

As is evident, each period consists of two regularly connected stages. The first of these is the stage dominated by the learning of objectives, motives, and norms of human activity and by the development of the need-motivational sphere. At this point preparation is made for the transition to the second stage, dominated by the acquisition of modes of action with objects and the development of operational and technical abilities.

All three periods (early childhood, childhood, adolescent) are structured along the same lines and are composed of two regularly connected stages. The transition from one period to the next is marked by a discrepancy between the child's operational and technical capacities and the tasks and motives that constitute the fabric of which these capacities are woven.

We know very little about the transition from one stage to the next or from one phase to the next.

What, exactly, is the theoretical and practical significance of our hypotheses concerning the
developmental stages and periodic scheme we have constructed on the basis of this hypotheses? First of all, the principle theoretical significance of our hypotheses lies in the fact that it permits us to overcome the dichotomy in child psychology between the development of the need-motivational aspect and the intellectual and cognitive aspect of the personality; it permits us to show their dialectical unity in opposition. Second, our hypotheses enables us to view the process, of mental development as an ascending spiral rather than linearly. Third, it opens the way for studying the links between individual stages, for explaining how each "sets the stage" functionally for the following one. Fourth, our hypothesis breaks down development into periods and stages in a way that corresponds to the inner laws of that development, not to mere external factors.

The practical significance of the hypothesis consists in the fact that it serves as an aid in resolving the question of the susceptibility of the various stages of child development to particular types of influence; it offers a new approach to the problem of the links between the various institutions in our present educational system. According to the requirements flowing from this hypothesis, at the place where we have a break in our present system (preschool institutions-school) we should have a tighter organic link. And, conversely, where we now have continuity (primary grades-intermediate grade) there should actually be an abrupt changeover to a new educational system.

Of course, only further investigation will show how accurately our hypothesis reflects the reality of child mental development.

Nevertheless, we consider publication of our hypothesis, despite its dearth of factual material, justified. We should remember the words of Friedrich Engels. "If we wanted to wait until the material for a law were pure, then we would have to suspend our theoretical research up to that point and that alone would keep us from ever arriving at the law." (111).

Notes from Original

* The Russian term used here may be translated literal as "periodization." The term "stage" is used because it is more consistent with current Western European and American usage. - Ed.

References

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