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## "Units" and Levels of Activity

The psychological structure of activity—its levels and its main units, or "formatives"—has been extensively analyzed in contemporary psychology, especially Soviet psychology. As early as 1935, in his *Foundations of Psychology* [Osnovy psikhologii] S.L. Rubinshtein introduced the following system of concepts: reaction—conscious action (or operation)—act (an action regulated by conscious relations); and in 1946, in *Foundations of General Psychology* [Osnovy obshchei psikhologii] the triad of "movement–action–activity."

But the most prevalent theory in our country and abroad was the theory of the internal structure of activity developed within the framework of the psychological school of L.S. Vygotsky and described in detail in the book by A.N. Leontiev, *Problems of the Development of Mind* [Problemy razvitiia psikhiki] (1959).

This theory has undergone many restatements and interpretations and has been combined with various approaches and "adapted" to a variety of specific studies. Throughout, even within the framework of activity theory itself, an ambiguous understanding of the units and levels of activity organization can be seen. P.Ia. Galperin's concept of "action" can be cited as an example

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(e.g., Galperin, 1976), an understanding that, like certain other aspects of his theory, demands analysis beyond the scope of this article.

It appears that the very possibility of alternative solutions to the problem of units and levels of activity given the sameness of the original theoretical postures reflects the open-ended, preliminary nature of the proposed theory, the existence from the very start of "reserves" within it for further development and clarification, and its fundamentally antidogmatic nature. At the same time, however, activity theory imposes certain methodological and theoretical limits on the diversity of possible interpretations of the structure of activity—something that is not always fully understood by some researchers. This makes it imperative that the problem of the structural levels of activity, as an object of special theoretical investigation, be given particular attention.

Inasmuch as the theory of A.N. Leontiev served as a starting point for many psychologists and philosophers working on the question of the structure of activity, it would be wise to clarify his understanding of the problem of units and levels that interests us here. First and foremost, attention should be paid to the fact that Problems of the Development of Mind was not written all at once: works from various years, reflecting the evolution of activity theory, are collected in this book. The chronological structure of he book and subsequent evolution of its author's views (see the monograph Activity. Consciousness. Personality [Deiatel'nost'. Soznanie. Lichnost']) are often overlooked in reference to its various propositions.

Before characterizing the understanding of the problem of activity units and levels in article, there are several things that should be said about the very concepts of "level" and "unit" in psychology. It is no secret that the concept of level in activity theory is genetically tied to the concept of level in the work of N.A. Bernstein, formulated in 1935. In Bernstein, this concept is dynamic, system-activity-oriented; levels are interpreted as a way of realizing sensory synthesis, a way "that is best suited for solving a particular problem given the quality and makeup of its contributing afferentations and their synthesis" (Bernstein, 1966, p. 97).

According to Bernstein, one and the same movement can be supported by different physiological organizations; but such an organization always has multiple levels.

The concept of the unit is particularly complicated. As is well known, A.N. Leontiev does not provide an explicit definition of it; as a rule, he puts the term "unit" within quotation marks, and in so doing, "determines" it. And this is justified: after all, as it applies to his point of view, the concept of unit has little applicability to activity, action, or operation, since it presumes their *discrete* nature. In other words, the concept of the unit is better suited to the model of Miller, Pribram, and Gallanter, for example (the "TOTE unit"). In A.N. Leontiev's conception, the only thing that can be called a "unit" in the strict sense is activity (an activity act).

As A.N. Leontiev sees it, the structure of activity takes the following form. At its basis lies the concept of action, of process, the object and motive of which are not the same. Next, there is the concept of operation. "Psychologically . . . the merging of separate, individual actions into unified actions is their transformation into operations" (Leontiev, 1972, p. 298). Another sort of operation is born out of the simple adaptation of action to the conditions of its execution. (For the sake of brevity, we will call operations of the first type conscious operations or "C-operations," and operations of the second type, which have a different relationship with consciousness, will be called *adaptive operations*, or "A-operations.") Finally, we have the introduction of the concept of activity as an action that has acquired an independent motive. In this case, and only in this case, we are dealing with a conscious motive. We should note that awareness of a motive is not elemental, but it demands a certain special process of reflection of the relationship between a particular activity's motive to the motive of the broader activity.

All of these tenets of the related theory of activity are often cited. Unfortunately, it is not uncommon for these citations to depict the structure of activity as being closed; concepts relating to the psychological nature of consciousness are given only an explanatory role. In fact, the most important feature of this conception is constituted in the fact that within it, the structure of activity

and the structure of consciousness are interchangeable concepts they are tied to one another in a unified, integrated system. The fact that an analysis of the structure of activity usually precedes an analysis of the structure of consciousness, which is determined genetically by the primate. But genetically, consciousness cannot be understood in any other way than as a product of activity. Functionally, they are interconnected: activity is "directed by consciousness," and at the same time, in a certain sense, it is activity that directs consciousness.

It is particularly important, therefore, to devote particular attention to the problem of the connection between the structure of activity and the structure of consciousness.

From the very beginning, A.N. Leontiev emphasizes that the appearance of a differentiated internal structure in activity is the consequence of the emergence of collective labor activity (1972, p. 273). It is possible when, and only then that man subjectively reflects the real or potential connection between his actions and the attainment of the overall end result. This is what makes it possible for a person to carry out separate actions that would not appear to be effective if taken in isolation, outside of collective activity.

"Together with the birth of an action," A.N. Leontiev writes, "with this main 'unit' of human activity, there arises the main social (by its nature) 'unit' of the human psyche, the rationale for a person regarding what he is directing his activity toward" (ibid., p. 274). At the same time, the possibility of awareness appears, of presentation of the material world, as a result of which awareness in the true sense emerges, as a reflection of reality through meanings.

The genesis, the development, and the functioning of consciousness are products of a level of development of the forms and functions of activity. "Along with a change in the structure of a person's activity there is also a change in the internal structure of his consciousness" (ibid., p. 186). How does this happen? Any mental reflection is always "biased." But it features what has objective ties, relationships, interactions, what enters into social consciousness and

is fixed in language, and what depends on the relationship of a given subject to the reflected object. This is the origin of the differentiation of *signification* and *personal meaning* that is so often analyzed by various authors. What interests us now is meaning as the specific relationship that arises in a subject's activity between what motivates him to act and what his action is directed toward, that is, the relationship between motive and goal. The relationship between signification and meaning is the relationship between the main "formatives" of the internal structure of human consciousness. We could put it even more categorically: this relationship is its main "formative."

The development of production dictates the emergence of a system of coordinated actions, that is, of complex action; and this signifies—on the level of consciousness—the most important step: the move from a conscious goal to a conceived condition of action, the appearance of *levels of awareness*. On the other hand, the division of labor and production specializations give birth to a "shift of motives onto goals," and the transformation of action into activity. New motives and new needs are born, and from here we get the subsequent qualitative differentiation of awareness.

Another exceptionally important step is the transition to truly *internal mental processes*, the emergence of a theoretical phase of practical activity. Internal speech actions appear, which, accordingly, form the general law of the shift of motives, internal activities and internal operations.

Like activity, consciousness is not merely the sum total of its elements; it has its own structure, its internal integrity, its logic. And if human life is a system of activities that alternate with one another and coexist or conflict with one another, then consciousness unites, supports their creation, their variation, their development, their hierarchy. So it is not the element-by-element connections of "units" of consciousness with "units of activity" that is most important, but, first, the system-forming role of consciousness in relation to the entirety of activities; and second, in the double-sided interdependence between the dynamic of the internal structure of consciousness and the dynamic structure of activity.

Let us look at how the ideas described above are treated in the book Activity. Consciousness. Personality (Leontiev, 1975, 1977).

What is emphasized here is primarily the nonadditive, molar nature of activity. It is "a system with its own structure, its own internal transitions and transformations, its own development, . . . incorporated into the system of social relationships" (ibid., p. 82). After all, in society, it is not merely a matter of man encountering external conditions to which he must adjust his activity; these societal conditions themselves encompass motives and goals for his activity, its means and ways, and through this "society generates the activity of the individuals who comprise it" (ibid., p. 83, emphasis added). What directs the process of activity is, primarily, the object itself, the material world, and, secondarily, its image as a subjective product of activity that fixes, stabilizes, and encompasses the material content. The conscious image is understood here as the ideal measure, reified in activity; human consciousness plays an essential role in the movement of activity. Thus, along with "consciousness-image" the concept of "consciousnessactivity" is introduced; and overall, consciousness is defined as the internal movement of its formative structures, movement incorporated into the overall movement of activity (ibid., p. 157).

It is emphasized again and again: actions are not isolated, "separate entities" within the makeup of activity: uniquely human activity exists in no other way than in the form of actions or chains of actions (ibid., p. 104). One and the same process serves as activity in its relation to motive, and as actions or a chain of actions in subordination to a goal. Thus, action is neither a component nor a unit of activity—it is specifically its "formative," its moment.

He goes on to analyze in greater detail the relationship between motives and goals. The concept of the "motive-goal" is introduced, that is, the motive serving the role of the "overall goal" (the goal of activity and not of action), and the idea of the "zone of goals," the delineation of which is entirely dependent on the motive. The selection of a specific goal and the process of goal formation is connected with "the approbation of goals through action" (ibid., p. 106). Along with this line of thought, the concept of the two

aspects of action is introduced. "Besides its intentional aspect (what must be achieved), action also has its operational aspect (such as, the means by which it will be achieved)" (ibid., p. 107). This leads to a somewhat different definition of operation—it is the quality that forms actions. While the genesis of action is in the exchange of activities, in the interrelations between "the collective subject" (Marx) and the individual subject, the genesis of operation is found in the interrelation among actions of a subject (one and the same), their incorporation into one another.

The question is raised as to the decomposition of activity into units smaller than operations (here no quotation marks are placed around the word *units*). The concept of the functional block, proposed by V.P. Zinchenko, is given as an example. But this is a transition to the analysis of the intracerebral processes that implement activity.

Finally, the concept of personality as the internal element of activity is introduced. It is specifically, and only as a result of the hierarchy of an individual's separate activities, which realize his essentially social relationship with the world, that he takes on a special quality—he becomes a personality. A new step in the analysis here is reflected in the fact that—while it was the concept of a system of actions that took center stage in the examination of activity—in the analysis of personality, the most important aspect is the concept of hierarchical connections between activities, the hierarchy of their motives. These connections, however, are in no way assigned to the individual as something that takes shape outside of activity or over activity. The development, the expansion of the circle of activities itself by necessity leads to their connection into "nodes," and from here to the formation of a new level of consciousness—the consciousness of personality.

It has been necessary to repeat certain well-known propositions about the conception of activity in order to show that, on the basis of its internal logic, this conception is widely open to further development. It is open both "downward" and "upward." It is open "downward" because it demands investigation of the intracerebral (psychophysiological) processes and structures generated by the

phylogenetic and ontogenetic development of material activity, that is, studying them as dependent on activity and at the same time conditioning the possibility of implementing activity. It is open "upward" in that it demands attention to concepts and categories of a more global nature than the concept of activity (as a unit), and first and foremost to concepts of the system and hierarchy of activities. But, naturally, this attention presumes the study of the interrelations between the structure of activity and the structure of consciousness and, then—with the concept of personality including an analysis of the structure of activity in a broader context.

Even from the cursory representation of the state of inquiry into the structure of activity provided above, it is evident that many questions essentially remain unexplored and have been posed only in general terms. Therefore, broad possibilities open up for a variety of solutions, which have indeed been proposed by a number of authors.

Without pretending to offer a summary that is by any means complete, we will pause to examine only two ideas of this issue that appear to raise the most serious questions. Let us first turn to the propositions put forth by E.G. Iudin in his articles from 1976– 77. Perhaps the most important points here are this author's understanding concerning the methodological status of activity theory and the resulting dilemma he sees: does the threefold structure of activity pertain to an analysis and explanation or to the actual object of study?

Iudin believes that in activity theory, the only true psychological object is the level of action, while two other levels carry out a more "clarifying role": activity, as a means of integrating psychology into a social-philosophical context, and operation, which integrates psychology into neurophysiology (1976, p. 75). Iudin believes that these levels are only an "explanatory schema," unconsciously understood, also as a "schema of the object."

Assuming from the beginning that concepts identified within the system of activity are "units of analysis," Iudin further notes further that in the trinomial structure of activity, such categories as motive,

goal, and condition occupy their own special place and that, evidently, they "must form a special category of units" (ibid., p. 77).

In another article (1976a), Iudin expresses the opinion that the trinomial scheme, sufficient as an explanatory scheme, demands special verification as the object of study. Furthermore, he reproaches A.N. Leontiev for turning directly to social phenomena (the division of labor, etc.) in explaining psychological phenomena. The author generally believes that one is not justified in defining consciousness and personality "solely through activity" (1977, p. 36), and calls for the creation of a psychological taxonomy.

While in the psychological theory discussed above, the nonadditive nature of activity is emphasized and viewed as a developing system that is characterized by the movement of its internal formatives, of its moments, and by their transformations, what stands out in the works of Iudin is the concept of units, their categories, their connections as independent entities, their taxonomy.

Consequently, the main proposition of the conception criticized by Iudin has been replaced. There is another problem in the works of this author. While he claims to hold a "neutral" position—he refuses to answer the question whether activity theory is the characterization of an object or a tool of analysis—in actuality, Iudin clearly understands it as a theoretical construct. This is the basis for the "socialization" reproach concerning some of its concepts.

If activity theory is a system of units of analysis, then this analysis should be undertaken within the framework of one particular science, in this case, psychology. But, if we are going to look at activity not simply as a theoretical construct, but as a methodological category, it becomes obvious that, in principle, it is impossible to construct a system of concepts of activity theory that would be "self-sufficient," that could describe a system of activity as such, in isolation from the "big" system in which it is contained, of which it is a part. For this reason, Iudin's reproaches in the "socialization" of certain concepts of activity theory appear to us to lack any foundation.

In essence, we have absolutely no methodological bases for the dilemma Iudin proposes. "Units of analysis" do not have their own

existence, independent of the object of study; a descriptive system cannot be opposed to the system of an object, about which L.K. Naumenko has written very clearly (1968, pp. 143-61). If we refuse to grant "units of analysis" a separate existence—and it seems that this is the only solution to the problem—then a special taxonomy of units of activity, and the introduction of a new series of units even more so, leads to a simple duplication of the problem. And such a special taxonomy seems hardly possible: the structure of activity as viewed within general psychological theory is inseparable from the structure of consciousness and from personality. Figuratively speaking, this is not so much a theory of activity as it is a theory of "activity-consciousness-personality."

The problem of units has been raised in the research of V.P. Zinchenko, which is of particular interest both in terms of its affinity to A.N. Leontiev's ideas concerning activity, and in terms of its richness.

According to Zinchenko, motives, goals, and conditions are components of activity. They are closely associated with three types of units. Each of these units, in turn, is a system of interconnected units from the preceding level; in a unified activity act, its organization is realized "in the unification of functionally defined processes (elements) that are subject to one and the same motive" (Zinchenko and Gordon, 1976, p. 83). In this connection, according to Zinchenko, there are problems within activity theory that demand an extension of its categorical framework. For example, in certain specific types of activity not all potentially possible properties of actions and operations are evident, but only those essential to the given conditions of activity, to the given goal that has been set. For this reason the question of the structure of new units of activity should be raised, "in particular those that are based in a functional dependency, together with the relations between separate elements (actions, operations), and their properties in the structure of the activity as a whole" (ibid., p. 101). This is where we derive the category of "functional structure."

Analyzing operations, Zinchenko proposes breaking them down into even smaller units. He considers the functional block to be such a unit, although it may not have "a direct application for behavior" (i.e., it may be just an element of an operation), but can have such an application "when it is essentially the same as what is known in activity theory as an operation" (ibid., p. 113).

In an article by V.P. Zinchenko and V.M. Munipov, we see an interpretation of operations that differs somewhat from A.N. Leontiev's: operations are determined "not by the conditions, as such, under which an act is carried out, but only by what is functionally significant within the conditions" (1976, p. 51). Conditions consist in the material properties of reality, which differ from functional ones. Consequently, according to Zinchenko, there is a special level of analysis of operations that is determined by the material properties of the situation: this is the level of functional blocks.

A clear conception of the levels of activity takes shape: microanalysis (blocks and subblocks) permit activity to be imbued with a particular material content, since only more elementary units are directly connected with reality. Therefore, the materiality of activity ascends from the bottom to the top, starting with elementary units, while its conceptualization goes from the top to the bottom. "It is their meeting that gives rise to activity" (ibid., p. 53).

In analyzing the works of Zinchenko, it is easy to see certain parallels between his views and those of Iudin. Whether explicitly or not, Zinchenko nonetheless often treats the structure of activity as an explanatory model, although elsewhere this structure is understood as a property of the object, that is, of activity itself. But what is particularly striking is Zinchenko's additive understanding of the very "unit" of activity. For him this unit has no quotation marks and at times it is even simply an element. This is the source of the three categories of analytical units of activity—operational, cognitive, and personality-based (Zinchenko, 1977, p. 23)—and also the source of the qualification of an action and an operation as representing "operational" units of activity. This is the very idea of separateness, of the additive nature of activity units, which, in our view, represents the idea of a "functional structure": this idea would hardly be justifiable given any other understanding.

In essence, any structure of activity is "functional" in the way Zinchenko looks at it: it has no other structure.

The matter becomes more complicated when it includes an operation. As we recall, Iudin believes an operation is a more physiological than a psychological concept. We will immediately state that this is totally incorrect as it concerns conscious or Coperations; here, we undoubtedly have a psychological concept. (We will note that A.N. Leontiev, who introduced a distinction between C-operations and A-operations in *Problems of the Devel*opment of Mind, later [in 1974] seems to have forgotten about the latter and deals only with C-operations.)

Concerning operations of the second type—adaptive, or A-operations—and their relationship to C-operations, the question remains open. One point is beyond doubt: the overall class of "operations" features its own relationships of incorporation and subordination (in particular, C-operations can incorporate A-operations). For this reason, in our own works analyzing speech activity, it became necessary to introduce the concept of "macro-operations" (e.g., the transformation of the sentence) and "micro-operations" (e.g., the choice of a word). But even the latter follows a more complex psychological course than Zinchenko's functional blocks (see A.A. Leontiev, 1974).

As it appears to us, transcending from "bottom to top," Zinchenko switches from functional blocks to A-operations when the functional blocks "can be transferred into new behavior" and to C-operations when there is no such direct outlet. In any event, he is aware of the fact that between operations and functional blocks (and even more so in the case of subblocks) there is a qualitative transition to new reality. This reality for him is a psychophysiological reality, on the one hand, and a "material" reality, on the other. It seems that in this case it would be unjustified to talk about a "material content." The materiality of activity is something else; it characterizes the level of activity and the level of action. In general, elementary units are hardly closer to reality—they are closer to "nonhuman," dead reality. Here there seems to be a logical jump from the structure of a particular kind of activity, a structure that has an orienting nature, to the structure of any activity. But this is another question, one about the hierarchy of activities themselves.

In light of what has been described above, it is possible to identify several main problems associated with the structural level of activity that have not been sufficiently clarified in the literature or that have been given contradictory interpretations.

The first of these problems is a certain ambiguity, and, in any case, a lack of refinement of two critical concepts: *sodezhanie deiatel nosti* [content of activity] and *aktivnost'* [activity]. This leaves room for a very varied interpretation of these two concepts, up to the structural characteristics of the former being attributed to *deiatel nost'* and the latter being subordinate to *aktivnost'* as species is to genus. We imagine a more precise interpretation of *aktivnost'* as a process that implements a subject's *personality* (super-activity) properties, and, consequently, something that is beyond the bounds of a "separate activity" within a system of activities (Petrovskii, 1975).

The "system of activities" itself is yet another unresolved problem in activity theory, or at least a part of this problem. As we have seen, in his 1975 monograph, A.N. Leontiev raised the question of the system of activities as being a characteristic of personality. But much is unclear here. First, the interrelations between motives (the hierarchy of activities) is not the same as a system of activities—they are separated in the text, but the author went no further. There are also inconsistencies in the treatment of the interrelation between the hierarchy and the system of activities, on the one hand, and personality and consciousness, on the other. While the individual activity is the basic unit of analysis of consciousness, at the same time, it is consciousness that "holds together" activity. While personality is characterized by hierarchical relationships among activities, at the same time, it is a product of the reflection by consciousness of the connections between activities and their hierarchies. V.A. Petrovskii generally talks about personality as a "system of activities" (1975, p. 37).

It strikes us that this problem has many sides. One aspect, the system of activities, is viewed from the perspective of personality: the simultaneous "bundle" of a subject's potential activities interrelated in various ways, for which it is possible to identify the primary aspect. This train of thought can be found in the works of A.N. Leontiev from the early 1940s. It is indeed personality that directly determines this system and is simultaneously determined by it. But it cannot, of course, be reduced to a system of activities and equated with it: this is another category, and, evidently, if we want to introduce into a system of activity levels a new, highest level, we must seek a "unit" for it. One way or another, however, the transition to this highest level, like the transition from operations to functional blocks, marks the transition to a new quality. In this regard, we prefer to talk about a personality system of activities, or about a P-system.

The second aspect is a hierarchy (or rather hierarchization) of activities in accordance with the degree to which they are "conceptualized," the degree to which they are endowed with personal significance, which is directly linked to the hierarchy of motivesgoals. Following this path, we arrive at different levels of activities, as we arrived earlier at different levels of operations. These activities can exist in tandem (or can conflict), or they can be incorporated into one another (although, here conflict is also possible); in this case one and the same system of actions plays a dual role for a subject—as the achievement of a short-term and longterm goal, which can be understood as the satisfaction of an immediate or remote motive. Here it is particularly helpful to distinguish between meaning-formative motives and stimulusmotives (Leontiev, 1977, p. 202). It is useful in this case to speak about a system of activities interrelated with consciousness (Csystem).

The third aspect is essential, and is associated with the existence of types of activity (such as perceptive activity), which by their very essence usually demand "incorporation" into another activity. This fact leads some researchers to deny the status of activity in such processes, and others, on the contrary, to proclaim such activities to be the only object of psychological study. Here we encounter an entire web of questions, the first of which is the

concept of orienting activity: is this an activity, and how does it enter into the overall system of activity, or the A-system? From this perspective, which is narrowly activity-focused, we examine the third system of activities, or the A-system.

Finally, the systemization of activities is at least threefold. It is absolutely essential and urgent to discover the nature, the specific dynamic process and interaction of these systems.

The third problem, which has been partially developed by O.K. Tikhomirov and V.P. Zinchenko, is associated with the difference between the intentional and the operational aspects of actions, and, consequently, with the dual orientation of the structure of activity, which seems to dissolve into two substructures: "activity—action" and "action—operation." The ellipses here signify the open nature of these substructures "upward" and "downward" respectively. If we present the structure of activity in this way, organically entered into the model are, first, the concept of a "system of activities" (another question is whether we are dealing with a Psystem, a C-system or an A-system; it is possible that an A-system is primarily correlated with the structure of interrelations between intentional and operational aspects); and second, the concept of operation breaks down into various parts.

It is not the confluence of conceptualization and materiality that gives "birth" to activity, but the confluence of intentionality and operationality. The "dynamic paradigm" of activity separated out by A.G. Asmolov and V.A. Petrovskii (1978) correlates perfectly with the second, the operational substructure; and we therefore consider Asmolov's idea about the levels of sets (attitudes) to be correct, but we feel that their hierarchy has a somewhat different character—all types of sets in a certain sense are operational (see Asmolov, 1977).

Consequently, one of the main questions that must be resolved is the dynamic relationship between the intentional and operational aspects at different levels of the structure of activity. It is within this understanding, and not within the understanding of the development of "the conception of the *aktivnost*' of person-

ality" where it is possible and necessary to overcome the "rough schemes interpreting the principle of the materiality of activity" (Smolian and Solntseva, 1977, p. 121).

The fourth problem was identified by A.N. Leontiev himself. This is the problem of the relationship between psychology and psychophysiology, the transition between the two in the analysis of activity. What is meant here are "those psychophysiological functions that realize activity, that in part compose its natural prerequisites and place certain limitations on its course, and in part are reshaped within it and are even generated by it" (Leontiev, 1974, p. 9).

Naturally, we have not exhausted the problems that arise at this stage in the development of activity theory. Indeed, this was not our objective. We merely attempted to demonstrate that the system of concepts describing the structure of activity is neither rigid nor closed, and that this system "works" not with elements or autonomous processes, but with "units" of a completely different way. And—of particular importance, in our view—the system of levels and units of activity is not only and not merely opened "upward" and "downward," it is not comparable with the structure of consciousness, and even less so is it contrasted to it, but is one with it. Finally, the system of levels and units of activity is internally multifaceted, dialectic, and dually oriented.

These features regarding the understanding of the structure of activity—which are not always clearly conceived, even by psychologists who base their work on activity theory—are the true prerequisites for the further development and refinement of this theory and its conceptual framework.

## References

Asmolov, A.G. 1977. "Deiatel' nost' i urovni ustanovok." Vestnik Moskovskogo universiteta, ser. 14. Psikhologiia, no. 1.

Asmolov, A.G., and B.A. Petrovskii. 1978. "O dinamicheskom podkhode k psikhologicheskomu analizu deiatel 'nosti." Voprosy psikhologii, no. 1. Bernshtein [Bernstein], N.A. 1966. Ocherki po fiziologii dvizhenii i fiziologii

aktivnosti. Moscow.

Gal'perin [Galperin], P.Ia. 1976. Vvedenie v psikhologiiu. Moscow.

- Iudin, E.G. 1976. "Poniatie deiatel' nosti kak metodologicheskaia problema." In Metodologicheskie problemy issledovaniia deiatel' nosti. Ergonomika-10. Moscow.
- ——. 1976a. "Deiatel'nost' kak ob"iasnitel'nyi printsip i kak predmet nauchnogo izucheniia." *Voprosy filosofii*, no. 5.
- . 1977. "Deiatel' nost' i sistemnost'." In Sistemnye issledovaniia. Ezhegodnik 1976. Moscow: Nauka.
- Leont'ev [Leontiev], A.A. 1974. "Psikhologicheskie osnovy obucheniia russkomu iazyku kak inostrannomu." *Russkii iazyk za rubezhom*, no. 4.
- Leont'ev [Leontiev], A.N. 1964. "Myshlenie." Voprosy filosofii, no. 4.
- ——. 1972. Problemy razvitiia psikhiki. Moscow (1st ed. 1959).
- . 1974. "Obshchee poniatie o deiatelnosti." In *Osnovy teorii rechevoi deiatel' nosti*, Moscow: Nauka.
- ——. 1977 [1975]. *Deiatel' nost'*. *Soznanie. Lichnost'*. 2d ed. Moscow: Politizdat.
- Naumenko, L.K. 1968. Monizm kak printsip dialekticheskoi logiki. Alma-Ata. Petrovskii, V.A. 1975. "K psikhologii aktivnosti lichnosti." Voprosy psikhologii, no. 3.
- Rubinshtein, S.L. 1935. Osnovy psikhologii. Moscow-Leningrad.
- ——. 1940. Osnovy obshchei psikhologii. Moscow.
- Smolian, G.L., and G.N. Soltseva. 1977. "Psikhologicheskie faktory optimizatsii trudovoi deitel nosti." *Voprosy filosofii*, no. 6.
- Tikhomirov, O.K. 1977. "Poniatie 'tsel' i 'tseleobrazovanie' v psikhologii." In *Psikhologicheskie mekhanizmy tseleobrazovaniia*. Moscow: Nauka.
- Zinchenko, V.P. 1977. "Printsipy analiza funktsional noi struktury poznavatel noi i ispolnitel noi deiatel nosti." In *Deitel nosti i psikhicheskie protsessy*. Moscow.
- Zinchenko, V.P., and V.M. Munipov. 1976. "Ergonomika i problemy komleksnogo podkhoda k izucheniiu trudovoi deiatel' nosti." In *Metodologicheskie problemy issledovaniia deiatel nosti. Ergonomika-10*. Moscow.

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