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Bridging Concept and Activity: a Dialectical Synthesis Proposal

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This work is a theoretical discussion about concept formation in a cultural-historical perspective that articulates Vygotsky's system of concepts within Leontiev's structure of activity. This effort has led to a theoretical proposition that we call concept-activity, a dialectical unity formed by a concept and its genetic activities, i.e., the systematised activities in which concepts emerge directed to a purpose. Taking volition and conscious awareness as analytic categories, we initially relate scientific concepts with actions — concepts-action — and everyday concepts with operations — concepts-operation. The articulation of these elements drives the emergence of conceptual thinking as an activity, framed by the term concept-activity. In other words, while scientific concepts are related to actions because both arise from a conscious and voluntary dimension, everyday concepts are related to operations through a non-conscious and non-voluntary dimension. A discussion on how the concept-activity synthetises the movement between these two forms of conceptualisations and its implication to concept formation is provided.

Keywords: concept formation, Activity theory, volition, conscious awareness.

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Introduction

This paper presents a discussion about the concept of concept from a cultural-historical activity theory perspective, considering mainly the works of Vygotsky and Leontiev. Even though these scholars are part of the same research tradition, their interests and analysis had different emphases. While the former focused on the higher mental functions formation through sign mediation, the second emphasised the influence of objective activity on mental activity development [3]. Our arguments are mainly grounded in both authors' primary references and establishes relationships between the notions of concept and activity in order to achieve a possible synthesis.

Concept and activity are both polysemic terms, which means that they assume different meanings depending on the academic tradition considered [2, 22]. For instance, the classical theory of concepts generally puts concepts as entities related to the categorization and definition of attributes that construct the sense of the objects for individuals [10]. Other approaches consider concepts as mental representations or abstract objects [23], informational units that can be processed [9] or dialogical generalizations [16]. However, only recently some attention has been given to the notion that concepts are not just structures of subjects' internal psyche but are also shared manifestations of social practices [14].

The definition of activity is also multifaceted and has a common sense associated with task or practice, but acquires a specific meaning within Russian psychology, in which the term is connected to the development of the human consciousness. Dafermos [3] elucidates that two contending traditions were underpinning the use of the term in early twentieth-century Russian psychology. The first tradition was connected to the reflex theory of Pavlov and Sechenov and considered activity as the physiological activity of organisms. On the other hand, the second tradition was rooted in Hegel and Marx's philosophy and ascribed activity to the sense of human praxis or "the basic unit of concrete human life" [29, p. 2]. Despite these two meanings being referred by two different words in Russian literature, *aktivnost* and *deyatelnost*, both are translated as activity in English [31].

Many studies have discussed how concepts are formed in collective activity, and thus presenting a notion of concept that detaches it from a mere mental and individual elaboration [8, 11, 13]. For instance, Nersessian [24, 25] presents concepts as dynamic, social and

collective creations that take shape throughout historical processes of attempts to solve specific problems. This view poses a close relationship between the way concepts are formed and articulated, and the norms and commitments shared among participants in a given community. Similarly, Hutchins [14] admits that concepts in practice go beyond individuals' contributions, and Hjørland [12] points out that concepts cannot be understood in isolation and outside the interests and theories that motivate their construction. Engeström, Nummijoki and Sannino [6] note that complex concept formation is a fundamentally social and collective process, and it cannot be reduced to an individual dimension of cognition or behaviour. In any case, concepts are embedded in human activity; being products or instruments of it [8].

The works discussed above already suggest an interdependent relationship between concept and activity. Therefore, the contribution of our paper is to draw on a perspective in which concept and activity are framed as a dialectical unit. However, dialectical unity does not mean taking these terms as a unity of opposites or an identity, but as an indissoluble unity [4, 26]. We call this theoretical construct concept-activity. The argument of this paper is divided into four other sections besides this introduction. In the first and second sections, we introduce Vygotsky's ideas of concept and Leontiev's structure of activity. In the subsequent section, we relate these perspectives through two interconnected categories, namely volition (or will) and conscious awareness that play a relevant role in those psychological perspectives above.

While Vygotsky employs volition and conscious awareness to distinguish everyday concepts from scientific ones [5, 7]; these same categories appear in the Leontiev's framework when discussing the difference between actions and operations, the formation of motives and voluntary memory [28]. Here, we follow the understanding that conscious awareness "is an act of consciousness whose object is the activity of consciousness itself" [32, p. 190], whereas volition refers to the "human ability to deliberately influence mental processes, behaviour and external circumstances" [28, p. 3]. In this sense, to be conscious of something is directly related to the volitional processes of being aware of objective reflection.

Concept and conceptual system

The development of concepts is a central topic in the Vygotskian research programme, and although most of this discussion is found in the collection known as Thinking and Speech [32], one can find more about it in other texts [33, 34]. In general terms, Vygotsky [32] argues against a classical notion of concept as an associative network and develops his theory pointing out that the thinking in concepts assigns a new quality to human psychology. For him, the higher mental functions — conceptual thinking, among them — are results of the internalization of sign operations as psychological tools. In his framework, the role sign mediation — mainly through language — underpins the concept formation process. "The concept is not possible without the word. Thinking in concepts is not possible in the absence of verbal thinking." [32, p. 131]. In other words, the genesis of a concept is a twofold process that simultaneously couples intellectual with speech operations.

The key discussion is that concept formation is a long and continuous process once the mere presentation of a name does not mean the concept formation in its totality. It registers the beginning of a development that never ends, "when the child first learns a new word, the development of its meaning is not completed but has only begun." [32, p. 170]. In this development, there are mental operations coupled up with social interactions, mainly through language, that culminate in a particular word meaning, which then becomes the bearer of the concept. Vygotsky relates concept formation to the mental operations of abstraction and generalization:

"In its natural developed form, however, the concept presupposes more than the unification and generalization of the distinct concrete elements of experience. It presupposes the isolation and abstraction of separate elements, the ability to view these isolated, abstracted elements independently of the concrete and empirical connections in which they are given" [32, p. 156].

Vygotsky [32] also assigns certain synonymy to terms such as concept, meaning and generalization, treating them often as identities: "any concept is a generalization" (p. 224) or "generalization and word meaning are synonyms" (p. 244). We understand that Vygotsky uses these associations with two objectives: firstly, it would approximate the phenomenon of thought to the phenomenon of speech, being the word meaning "a unity of word and thought" (p. 244). Secondly, it would be to frame generalization as conceptual development. To build on this perspective, Vygotsky often calls upon the situation of a child elaborating the meaning of a word through the interaction with people around them. "By addressing the child in speech, adults determine the path along which the development of generalizations will move and where that development will lead, that is, they determine the resulting generalization" (p. 143). In other words, the ways in which concepts and word meanings are negotiated are determined by the interactions between the child and the people around them.

In the Vygotskian framework, concepts are not isolated but compose a system that maintains the characteristics of the developmental path of such concepts. For example, he explains that a conceptual system is nothing more than a system of relations between concepts, in which a concept is designated by means of other concepts. "Every concept arises already connected with all others and, having arisen, seemingly determines its place in a system of previously recognized concepts" [34, p. 48]. In more detail, he explains that:

"if a higher concept arises above the given concept, there must be several subordinate concepts that include it. Moreover, the relationships of these other subordinate concepts to the given concept must be defined by the system created by the higher concept. If this were not so, the higher concept would not be higher than the given concept. This higher concept presupposes both a hierarchical system and concepts subordinate and systematically related to the given concept. [...] Thus, at one and the same time, generalization implies the conscious awareness and the systematization of concepts" [32, p. 192].

With mention to higher and lower concepts, this hierarchical scheme is central in Vygotsky's theory for the differentiation of concepts into everyday and scientific concepts. Roughly, we understand that concepts that have their elaboration linked to the everyday experience (and discursive interactions around it) are called concepts of everyday genesis, or, simply, everyday concepts. Vygotsky [32] emphasizes that this process of elaboration is based on the "immediate encounter" that children have with "real things" but also based on the explanations given by the adults (p. 219). On the other hand, concepts formed within a systematized circle of instruction, usually beginning with a verbal definition, are called concepts of scientific genesis or scientific concepts. Then, the distinction into these two forms of concepts reflects the differences of their genetic paths, which, by their turn, are expressions of the kind of the activity that subjects are participating in.

Describing the underlying processes, Vygotsky says that everyday concepts are given from the object to the concept, while in the scientific case, the development follows an opposite direction, from the mediated relation, that is, from the concept, to the object. This differentiation becomes particularly clear when Vygotsky discusses the elaboration of the concepts of 'brother' and 'Archimedes' law' by a school-age child, the first as an example of everyday concept and the second as a scientific one:

"The child formulates Archimedes' law better than he formulates his definition of what a brother is. This obviously reflects the different developmental path that have led to the formation of these concepts. The child has learned the concept of 'Archimedes' law' differently than he has learned the concept of 'brother'. The child knew what a brother was, and passed through many stages in the development of this knowledge, before he learned to define the word 'brother' (if he ever had the occasion to learn this). The development of the concept, 'brother', did not begin with a teacher's explanation or with a scientific formulation. This concept is saturated with the child's own rich, personal experience. It had already passed through a significant part of its development course and had exhausted much of the purely empirical content it contains before the child encountered it in definition. Of course, this was not the case with the concept that underlies 'Archimedes' law'." [32, p. 178].

At this point, it is worth noting that we do not see everyday and scientific concepts as ontologically distinct, i.e., with different natures. Thus, the emphasis here is on the contexts and processes of concept formation, that is, the activities that imprint the genesis of concepts. In other words, although these two forms of conceptual development occur in different ways and under different conditions, the overall process remains unified.

Here, we propose a detailed examination of these conditions that affect the process of concept formation and their implications for the composition, structure and dynamics of the conceptual system. The aim is to highlight the factors that differentiate the genesis of everyday concepts from scientific ones. Vygotsky [32] employs volition and conscious awareness to describe the underlying processes of everyday and scientific concepts formation. The point is to contrast volitional (voluntary) and conscious processes with non-volitional (involuntary or spontaneous) and non-conscious ones. By non-conscious, we mean lack of conscious awareness.

In this sense, the formation of everyday concepts is said to be non-volitional because the child "possesses them only when they are used spontaneously or automatically" (p. 205), and non-conscious because when a child uses everyday concepts, "he has a concept of the object and is consciously aware of the object that is represented in the concept. He is not, however, consciously aware of the concept itself." (p. 217). Contrarily, scientific concepts are apprehended in a volitional and conscious way, because in the school, the child learns to have "conscious awareness of what he does", that is "his capacity moves from an unconscious, automatic plane to a voluntary, intentional, and conscious plane" (p. 206). Therefore, learning in a systematized environment occurs under a context of voluntary control.

Considering the earlier examples, during the learning of the concept of 'brother', which occurs through successive generalizations from the object and the discursive interactions around it, the child has no conscious awareness and volition over the process. Conversely, when learning about 'Archimedes' law' in an environment of formal instruction, the child operates the process consciously and volitionally. Here, we do not mean that a child only elaborates everyday concepts when at home or scientific concepts when they are at school. Certainly, there are non-conscious and non-volitional learning at school and conscious and volitional learning at home. Still, in our understanding, this means that the concept of 'brother' will not always be considered an everyday concept, and that of 'Archimedes' law' a scientific concept. This distinction merely marks two different paths of the concept genetic process. The point to be noticed is that these two contexts of learning are characterized by different conditions and require different activities from the subjects, which will affect the ways concepts are elaborated.

In another of Vygotsky's writing [33], regrettably in Russian only, it presents the findings of a psychological test about the uses of some verbal logical connectives by children and a discussion is done in the light of volition and conscious awareness. For example, he finds that children have difficulty of using or interpreting the 'why' and 'though' connectives when they are required to do so on a conscious and volitional basis. He notes, however, that children are able to correctly use these same connectives spontaneously, that is, in a non-conscious and non-volitional way. In this case, he explains that "the child does not know how to voluntarily do what he or she involuntarily does many times" [33, p. 8][1].

[1] We are enormously grateful with Prof. Manolis Dafermos, who made the translations from the original citations in Russian to English: «что ребенок не умеет произвольно сделать то, что непроизвольно делает много раз».

Thus, a child who masters concepts in a non-conscious way can routinely employ them correctly but might struggle to define or explain them. This is one of the everyday concepts' features, "children who have already mastered these concepts and causal relationships unconsciously, have not yet mastered them consciously, that is voluntarily" [33, p. 9][2]. Again, in the case of the concept of 'brother', the child uses it in discursive interactions within their family, but they might find difficulty in defining it as 'boy or man with the same parents as another person'. On the other hand, the formation of a scientific concept occurs in a volitional and conscious way, "the child easily uses it in response to the teacher's question, that is voluntarily" [33, p. 12][3].

Vygotsky also relates the impact of volition and conscious awareness on the conceptual system. He associates these categories in order to assign a systematicity within the system of concepts:

"Thus, spontaneity and a lack of conscious awareness of concepts, spontaneity and the extra-systemic nature of concepts, are synonymous. Correspondingly, nonspontaneous scientific concepts, because of what makes them nonspontaneous, will be characterized from the outset by conscious awareness. From the outset, they will be characterized by the presence of a system" [32, p. 236].

In this extract, Vygotsky indicates that everyday concepts are associated with a lack of systematicity, while scientific concepts are linked to a system. In our interpretation, the part of the system related to everyday concepts is more immediate, with fewer conscious mediations among them. On the other hand, the subsystem of scientific concepts is more consciously mediated, and therefore a more conscious system. That is to say, for example, when a child who learns the concept of 'Archimedes' law' consciously, they easily relate it to a whole conceptual network (water, density, volume, force) and use it with a certain level of conscious awareness and volition within this network. Although it is clear that the concept of 'brother' also belongs to a system and is linked to other concepts (son, father, mother, family), when a child uses it in everyday life, the relationships between these concepts are not conscious.

Finally, Vygotsky conventionally takes a vertical hierarchy within the conceptual system and explains the dynamics between everyday and scientific concepts. As we interpret it, everyday concepts would be in a less systematized part of the system and therefore subjects would operate with them less consciously. In turn, scientific concepts would be in a more systematized part of the system, leading to more conscious uses. In other words, the hierarchical levels between concepts are reflected in the levels of the subject's conscious awareness. Thus, for Vygotsky, everyday concepts develop towards scientific concepts, that is, through the use with more conscious awareness and volition, while scientific concepts would have an inverse movement. When scientific concepts are incorporated into the everyday conceptual chains, they would lose specificity, gain generality, and become less conscious and voluntary.

Even though these two concept formation processes have different paths, they are "internally and profoundly connected with one another" [32, p. 219]. Given this complementary character, there is a dynamic relationship between these two conceptual processes that merge during the subjects' life when in activity. We shall return to this theme in the following sections.

Activity and the structure of the activity

From the theoretical tradition Vygotsky initiated, a psychology research branch was derived under the name of Activity Theory, whose important developer was Alexei Leontiev. The main hypothesis of this perspective is that the structure of the internalized mental processes would be analogous to the structure of the activities carried out by the subjects. This thesis is usually depicted as a principle, which treats consciousness and activity as a unity [4].

The meaning of activity, even within Russian psychology, is not simple. One of the reasons for its complexity is that the notion of activity refers to a category of analysis that comprises the totality of human development, which is constituted by the cultural, social and historical dimensions of that process [1, 3]. However, it might be argued that the most consensual meaning refers to the Marxist perspective, in which the concepts of activity and labour are related: human being transforms the natural world while dialectically transforms themselves.

Leontiev [19] argues that the emergence of labour and the formation of society produced qualitative changes in human mental processes, the rise of "higher forms of psyche" (p. 58). In this context, collective activity is considered the proper human ontogenetic development, the process which endows human being with human nature. Leontiev calls this process appropriation — "the individual's reproduction of historically formed human capacities and functions" [20, p. 266], and therefore poses activity as the "activity of a member of a human society at a certain stage of development of labor" [19, p. 60].

In Leontiev's perspective, activity is the molar unit of analysis of human consciousness and life [20, 21]. Activity comprises the relationships between human beings and the world and orient the subject towards the world of objects; for this reason, it is said to be an object-oriented activity. In this sense, the notion of activity does not consider the practical processes in isolation, but it coordinates them with the psychological processes involved in achieving the activity's motive. Object and motive are key in the activity framework, in which the "consciously realized object" coincides with its motive [20, p. 62].

So, an activity is distinguished from another by its objects and motives. Each activity is directed to an object

[2] «что дети, которые уже овладели этими понятиями и причинными отношениями неосознанно, еще не овладели ими осознанно, то есть произвольно».

[3] «в школе то, что ребенок легко его употребляет в ответ на вопрос учителя, т. е. Произвольно».

that expresses, materially and ideally, the motive that is the activity source. For instance, in the collective hunting activity, the object is the animal prey which materialises the activity's motive of hunger and fulfils the need for feeding [20]. Taking another example from Leontiev's writings, in order to know whether the reading of a book can be considered an activity or not, one should analyse the needs of the subject and the conditions of this reading activity [19]. Such analysis will identify, for example, whether the subject is a student that is preparing themselves for one exam. In this case, the reading is not an activity as the motive that orients the subject to read the book is not its content but the need for having a good grade. Therefore, the activity is the preparation for the exam. Conversely, if the subject is reading the book for pleasure and entertainment, then it is considered an activity because it realises its motive — the need to acquire knowledge or simply a pastime. In other words, while in the former the object is the final grade, in the latter the object is the book content.

A second level in the activity's structure is identified as action, a coordinated and subordinated process to the overall activity level. As every activity is associated with a motive, every action also finds its aim in the realisation of a specific goal that is in the subject's conscious awareness [19]. Therefore, being at different levels, the action's goal cannot be misunderstood with the activity's motive. Going back to the latter example where a student is preparing themselves for an exam, the book reading is considered an action within the whole activity. Other actions could be reviewing the notes of the lessons attended, writing summaries and discussing with colleagues. To summarize, "human activity exists only in the form of an action or a chain of actions" [17, p. 24], i.e., each activity is constituted by the coordination of actions and their goals.

The third and final structural component is operation, which registers the conditions to the realisation of actions. Leontiev [20] defines operation as "the mode of performing an act", "the necessary content of any action but it is not identical with the latter" (p. 369). In general, an action is constituted by different operations, and one same operation can compose different actions. The operations are dependent on the concrete conditions imposed by the current situation. One of the main operations' characteristics is that the subject performs them in an automatic way, i.e., such subject does not have conscious awareness of them [21]. Taking the reading activity again, the muscular movements that support the book or control the eye are examples of operations.

To make clear the dynamics between actions and operations and illustrate the different levels of the subject's consciousness, Leontiev [21] gives us another example; a person driving a car. For a novice driver, the gear shifting has a conscious orientation in which this driver considers the car speed, the different strengths and pressures in each foot to release the clutch and push the accelerator, the hand movement on the gear and so on. As the novice driver is conscious of all those acts, the gear shifting is considered an action within the activity of driving a car. However, these actions become more and more routinized during the practice, leaving the conscious plane and are transformed into operations. Thus, all acts required to shift the gears are already at the operations level for an expert driver, and they are not in the subject's conscious awareness. In this situation, the driver's activity is not more 'driving a car', but 'go to work', in which they perform conscious actions such as choosing the best route or how to overtake a slow car. In this situation, 'driving a car' has become an operation.

A relevant point here is that the activity's structure is a dynamics between actions and operations in which one can be converted into another and vice-versa. Leontiev [21] explains this process through the shifting of motives. For example, the activity's motive can be transformed into a goal, i.e., the activity can lose its main motive and be converted into an action. Alternatively, an action can become itself an activity whether its goal becomes independent and motivating the entire process [21].

The main feature of this dynamics is the subject's conscious awareness in relation to the motive and goals. An action is converted into operation when such action becomes a condition to perform another action; in this process, "what was the goal of the given action must be converted into a condition of the action required by the new aim" [20, p. 370]. More, the mechanism that underpins such conversion is grounded on the shift from volitional and conscious processes into involuntary ones (p. 375). Going back to the expert driver, even though they perform all the acts of shifting gears at the operations level, those acts can be brought to the conscious awareness when this driver experiences a new activity such as driving an automatic car or in left-hand traffic. Then, these operations momently become actions.

In this section, we have presented the activity structure and the features and dynamics of its components. In the next section, we draw a parallel between these two theories considered until this point.

Concept-activity

The grounds for building this section are based on the thesis of the "common structure of human activity and individual consciousness" [21, p. 98]. In fact, both psychologists signalled for an understanding of concept that calls for the consideration of practical and objective life. For instance, when taking Vygotsky's later writings, there is a definition for concept that is seldom commented in the literature.

"A real concept is an image of an objective thing in its complexity. Only when we recognize the thing in all its connections and relations, only when this diversity is synthesized in a word, in an integral image through a multitude of determinations, do we develop a concept. According to the teaching of dialectical logic, a concept includes not only the general, but also the individual and particular" [34, p. 53].

While in his first writings, there is a tendency to deal with the concept formation as successive acts of abstraction and further generalizations, in this later work he argues in terms of "a complex system of mediating connections and relations disclosed in determinations of the concept" (p. 53). Thus, the result of those movements from the general to the particular is the rise of the concept as an objective reflection. He also replaces terms such as abstraction and generalization for "acts of thought" or "act of judgments" that, again, signal the focus on the objective reflection. Overall, a con-

cept is now understood as a process that accounts for the object's essence in all its complexity and diversity and in connection and relationship to the reality, which is a much closer view to the dialectical materialism.

Leontiev [18] also discusses concept formation in terms of word meaning and puts it as a result "of man's encounter with material reality in the process of his relating to it, i.e., in the process of practice." (p. 24). Here, it is also noticed the same effort to extend the concept of concept to include the dimension of concrete reality, or, in our terms, the concrete activity. Elsewhere, he says that meanings are a "materialized ideal form of the existence of the objective world, its properties, connections and relations revealed by aggregate social practice." [21, p. 16]. Again, there is a sense to frame concept under a perspective beyond a purely intellective element and includes the practice.

Notwithstanding, we can further develop the association between the conceptual system and the activity structure more literally. From this perspective, everyday concepts would be for operations, and scientific concepts would be for actions. In this regard, we consider the categories of volition and conscious awareness as common attributes to both processes, concept formation and activity. In Vygotsky's words, "The problem of voluntary activity is directly dependent on the problem of conscious awareness of this activity." [33, p. 8][4].

Exploring the above correspondence, scientific concepts and actions present some similar features; both are in a higher level of a subject's conscious awareness, and both are employed in a volitional manner, i.e., oriented to a specific goal. This conjunction is identified as concept-action. Similarly, everyday concepts and operations comprise another unity, which the main features are the lower level of conscious awareness and non-volitional use. Here, the concept-operation is a condition to the concept-action.

In our proposal, the concept-activity makes explicit that both are products of the relationships between human beings and the world. Dialectically, concepts are given in/by activities, while activities are built around shared concepts. In other words, the concept-activity is not only the ideal-intellectual activity or nether the material-practical activity, but a unity, it is a momentary and transitory emergence of the synthesis between thinking-speech and consciousness-activity. Drawing on Vygotsky's Marxist perspective, Roth [27] agrees that thinking should not be theorized in itself, that is, divorced from the subjects' life, but also including what he calls "the chain of events *within which it arises of necessity*" (p. 17, emphasis in the original), outside from the mind. This is the concept-activity's spirit, the conjugation of concept and activity that emerges through the human praxis.

Finally, Zinchenko [35] draws a beautiful example of how language supports the production of images and actions that illustrate the concept-activity. He considers the activity of a mother feeding a child by giving her breast while gently saying sweet words. The emerging concept-activity from this co-created event relates satiety and hunger not only to the meaning of milk but also to the emotions, feelings and actions that involve the entire process. Paraphrasing Zinchenko's words, we can say that the concept-activity is "literally absorbed with mother's milk", dialectically arising from the mother-child's lived experience (p. 71). This example might form a rich image for the description of the dialectical synthesis that we are proposing.

Conclusion

In this paper, we have presented and discussed some aspects of Vygotsky's and Leontiev's works to propose a synthesis in the form of the concept-activity. Its direct implication is overcoming concept as something internal, subjective and mental, and activity as something external, objective and practical. Others have already tackled this problem of the separation between internal and external activity, however, the theoretical importance of our effort is twofold: first, it employs only primary sources of cultural-historical works, and second, the dialectical unity is explicitly based on the association of psychological structures regarding the categories of conscious awareness and volition.

We have argued about the essential and interconnected relationship between concept and activity as a unity that emerges through human praxis; that is, concepts constitute-and-are-constituted within activities. They are intrinsically connected and should not be considered separately or the same thing, but a unit. On the one hand, concepts detached from activities are crystallized and sterile entities that have lost their relations with the world. On the other hand, activities are impossible to be carried out without concepts, there is no way of an activity being collective and objectified without negotiating and sharing meanings. Therefore, we are pointing out that different practices develop different qualities on concepts embedded in them; those practices produce and express the formation of concepts with higher or lower levels of consciousness-volition. The mechanism behind this genetic route lies in the "generalizing activity of consciousness" [18, p. 26]. Apart from the theoretical and academic problem described on the lines above, when addressing the concept-activity we can deal with two other issues, schooling and human development.

This proposal sheds light also on the kind of generalizing activity of consciousness that happens at traditional teacher-centered schooling. Students are typically seated in rows in such a format, copying the content from the board or book and answering the teacher's closed questions. The ultimate goal is to reproduce such a definition in a future exam. As a result, the object of knowledge is attached to a verbal definition within a very narrow discursive practice. The concepts produced in this kind of activity "lose their attachment with the social practices in which they were born" [15, p. 527]. In this educational process, the generalizing activity of consciousness is limited, and there is no expansion towards other registers of conscious awareness and volition. To overcome this situation, educators might use the concept-activity as a tool for designing classroom activities that can promote different

[4] «Проблема произвольной деятельности находится в непосредственной зависимости от проблемы осознания этой деятельности».

levels of students' conscious awareness and volition on their ownership of concepts. Moreover, a metacognitive approach on the concept-activity at school might foster students to reflect on the content and form that they are learning, consciously developing the psychological operations they are operating. Here, each student is viewed as a productive subject of concepts-in-school-activities.

We see the concept-activity unity points to an even broader construct based on the Spinozian dialectical principle that nothing can be separated from its relation to the world [27]. Stetsenko poses this principle as the entanglement of individual human beings and the world:

"This project posits that there is only one world—the world that people create through their activities—in which human beings come to be and to develop as well as get to deal with and to know about. [...] Therefore, knowledge and concepts (in whatever degree of generality and abstractness) do not exist as free floating constructions, in some realm that is separate from what individual people do and enact—though always do so within collectivities and as social subjects. [...]. Instead, they represent reifications, embodiments of communal social practices (as aptly shown by E.V. Ilyenkov and A.N. Leontiev) that come into being only when being again involved—further transformed and creatively developed—in activities carried out by concrete individuals through their unique contributions to social practices" [30, p. 85].

One might read this quote through the lenses of the concept-activity, in which it means the "embodiments of communal social practices that come into being only in activities carried out by concrete individuals" in a single unity. Finally, the concept-activity synthesis can be associated with the process of human development when the former is apprehended in its dialectical movement. In other words, the concept-activity movement in the subject's history is nothing else than their dialectic transformation, meaning the changing of the world and, in so doing, changing ourselves.

References

1. Bakhurst D. Reflections on activity theory. *Educational Review*, 2009. Vol. 61, no. 2, pp. 197—210. DOI:10.1080/00131910902846916

2. Blunden A. *Concepts: A critical approach*, 2012. Koninklijke Brill NV.

3. Dafermos M. Activity theory: Theory and practice, 2015. In I. Parker (Ed.), *Handbook of critical psychology* (pp. 261—270). Routledge.

4. Davydov V. V. *Problems of developmental teaching: The experience of theoretical and experimental psychology research*, 1988. Vol. 30. M.E. Sharpe.

5. Derry J. *Vygotsky, Philosophy and Education*, 2013. John Wiley & Sons. DOI:10.1002/9781118368732

6. Engeström Y., Nummijoki J., Sannino A. Embodied Germ Cell at Work: Building an Expansive Concept of Physical Mobility in Home Care. *Mind, Culture, and Activity*, 2012. Vol. 19, no. 3, pp. 287—309. DOI:10.1080/10749039.2012.688177

7. Engeström Y., Sannino A. Concept Formation in the Wild. *Mind, Culture, and Activity*, 2012. Vol. 19, no. 3, pp. 201—206. DOI:10.1080/10749039.2012.690813

8. Engeström Y., Pasanen A., Toiviainen H., Haavisto V. Expansive learning as collaborative concept formation at work, 2005. In K. Yamazumi, Y. Engeström, H Daniels (Eds.), *New learning challenges: Going beyond the industrial age system of school and work* (pp. 47—77). Kansai University Press.

9. Fodor J. *Concepts: Where cognitive science went wrong*, 1998. Oxford University Press.

10. Franks B. Sense Generation: A "Quasi-Classical" Approach to Concepts and Concept Combination. *Cognitive Science*, 1995. Vol. 19, no. 4, pp. 441—505.

11. Greeno J. G. Learning in activity, 2005. In R.K. Sawyer (Ed.), *The Cambridge Handbook of the learning sciences* (pp. 79—96). Cambridge University Press.

12. Hjørland B. Concept theory. *Journal of the American Society for Information Science and Technology*, 2009, Vol. 60, no. 8, pp. 1519—1536. DOI:10.1002/asi.21082

13. Hutchins E. *Cognition in the Wild*, 1995. MIT Press.

14. Hutchins E. Concepts in practice as sources of order. *Mind, Culture, and Activity*, 2012. Vol. 19, no. 3, pp. 314—323. DOI:10.1080/10749039.2012.694006

15. Larrain A. Argumentation and concept development: The role of imagination. *European Journal of Psychology of Education*, 2017. Vol. 32, no. 4, pp. 521—536. DOI:10.1007/s10212-016-0316-7

16. Larrain A., Haye A. A dialogical conception of concepts. *Theory & Psychology*, 2014. Vol. 24, no. 4, pp. 459—478. DOI:10.1177/0959354314538546

17. Leontiev A. The Problem of Activity in Psychology. *Soviet Psychology*, 1974. Vol. 13, no. 2, pp. 4—33. DOI:10.2753/RPO1061-040513024

18. Leontiev A. The Assimilation of Scientific Concepts by Schoolchildren: A Problem in Pedagogical Psychology. *Journal of Russian and East European Psychology*, 1995. Vol. 33, no. 6, pp. 12—38. DOI:10.2753/RPO1061-0405330612

19. Leontiev A. The genesis of activity. *Journal of Russian & East European Psychology*, 2005. Vol. 43, no. 4, pp. 58—71.

20. Leontiev A. *The development of mind*, 2009. Marxists Internet Archive.

21. Leontiev A. *Activity and consciousness*, 2009. Marxists Internet Archive.

22. Levant A. Two, three, many strands of activity theory! *Educational Review*, 2018. Vol. 70, no. 1, pp. 100—108. DOI:10.1080/00131911.2018.1388619

23. Margolis E., Laurence S. The ontology of concepts—Abstract objects or mental representations? *Noûs*, 2007. Vol. 41, no. 4, pp. 561—593.

24. Nersessian N. The Cognitive-Cultural Systems of the Research Laboratory. *Organization Studies*, 2006. Vol. 27, no. 1, pp. 125—145. DOI:10.1177/0170840606061842

25. Nersessian N. Engineering Concepts: The Interplay between Concept Formation and Modeling Practices in Bioengineering Sciences. *Mind, Culture, and Activity*, 2012. Vol. 19, no. 3, pp. 222—239. DOI:10.1080/10749039.2012.688232

26. Roth W.-M. Conceiving concepts and conceptions: A cultural-historical approach. *Journal of Theoretical and Philosophical Psychology*, 2011. Vol. 31, no. 2, pp. 106—114. DOI:10.1037/a0023160

27. Roth W.-M. *The Mathematics of Mathematics: thinking with the late Spinozist Vygotsky*, 2017. Sense Publishers

28. Sannino A. The principle of double stimulation: A path to volitional action. *Learning, Culture and Social Interaction*, 2015. Vol. 6, pp. 1—15. DOI:10.1016/j.lcsi.2015.01.001

29. Sannino A., Daniels H., Gutiérrez K.D. *Learning and Expanding with Activity Theory*, 2009. Cambridge University Press.

30. Stetsenko A. Standing on the Shoulders of Giants A Balancing Act of Dialectically Theorizing Conceptual Understanding on the Grounds of Vygotsky's Project, 2010. In W,-M. Roth (Ed.), *Re/Structuring Science Education: ReUniting Sociological and Psychological Perspectives* (pp. 69—88). Springer. DOI:10.1007/978-90-481-3996-5_6

31. Veresov N. Marxist and non-Marxist aspects of the cultural-historical psychology of LS Vygotsky. *Outlines. Critical Practice Studies*, 2005. Vol. 7, no. 1, pp. 31—49.

32. Vygotsky L. *The Collected Works of L.S. Vygotsky. Problems of general psychology*, 1987. Vol. 1 (R.W. Rieber & A.S. Carton, Eds.; N. Minick, Trans.). Plenum Press.

33. Vygotsky L. Развитие житейских и научных понятий в школьном возрасте [Development of everyday and scientific concepts in school age children]. *Психологическая Наука и Образование [Psychological Science and Education]*, 1996. Vol. 1, pp. 5—19.

34. Vygotsky L. *The Collected Works of L.S. Vygotsky. Child psychology*, 1998. Vol. 5 (R.W. Rieber, Ed.; M.J. Hall, Trans.). Plenum Press.

35. Zinchenko V.P. Early stages in children's cultural development, 2011. In M. Hedegaard, A. Edwards, & M. Fleer (Eds.), *Motives in children's development* (pp. 63—76). Cambridge University Press. DOI:10.1017/CBO9781139049474.006

Связывая понятие и деятельность: вариант диалектического синтеза

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В настоящей статье, которая носит дискуссионный характер, предпринята попытка рассмотреть проблему формирования понятий сквозь призму синтеза понятийного аппарата культурно-исторической теории Л.С. Выготского и системы понятий деятельностного подхода А.Н. Леонтьева. Идея связать одно с другим привела нас к теоретическому конструкту, который мы назвали понятие-деятельность (concept-activity): это диалектическое единство понятия и его генетической деятельности, т.е. систематизированных видов деятельности, в которых рождаются и обретают целенаправленность понятия. Используя категории воли и сознания, мы связываем научные понятия с действиями (понятия-действия), а житейские понятия — с операциями (понятия-операции). Объединение этих элементов позволяет рассматривать возникновение понятийного мышления как деятельность и обозначать это термином «понятие-деятельность». Иными словами, если научные понятия связаны с действиями, то, поскольку и те, и другие происходят из сознательного и произвольного, житейские понятия связаны с операциями, т.к. находятся в сфере не-сознательного и не-произвольного. В статье также обсуждается, каким образом категория понятия-деятельности обобщает переход между двумя формами понятий и какое значение это имеет применительно к формированию понятий.

Ключевые слова: формирование понятий, теория деятельности, произвольность, сознание.

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