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Vygotsky under debate: two points of view on school learning

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Vygotsky's name has never been so evoked as it is at the present time, yet the educational scientific community faces an awkward situation. On the one hand, his works have been used as the basis for certain socioconstructivist school reforms that he would surely have completely disapproved of (Vygotsky, 1934/1987, p. 211). On the other hand, the recent collection of his writings (Yvon & Zinchenko, 2012) and other works (Brossard, 1999, 2004; Schneuwly, 2008b) lead us to another interpretation, in which the internal evolution of didactic content is at the forefront of Vygotsky's precepts. Therefore, although it is unpleasant, we are confronted by different points of view on Vygotsky's work that need to be investigated and exposed. This article sets out to achieve that objective.

Keywords: child's intellectual development, school learning, interpretations of Vygotsky's work

Two Interpretations of Vygotsky's Work

The first interpretation of L. S. Vygotsky's work can be found in Wertsch (1985), Cole (1985), Rogoff (1991), and Bruner (1983) and has been developed in Anglo-Saxon countries; it gives priority to a social analysis of Vygotsky's writings. The thesis of the complementarity between Jean Piaget's and Vygotsky's works is often adopted (Rogoff, 1991). If Piaget established as a theoretical basis that the cumulative and progressive construction of the mental structures of knowledge takes place as a result of the lone child's interaction with objects, Vygotsky, with his concept of the zone of proximal development (ZPD), depicted the integration of others in the child's knowledge construction; he also created a theory of the teacher's activity, which stimulates the child's development and supports the child in knowledge conquests, thereby accelerating future or budding conquests (Bruner, 1983).

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The work that permits these researchers to set up such an interpretation is *Mind in Society* (Vygotsky, 1978). This book compiles extracts of texts written by Vygotsky at different times and enables a combined reading of his works that presents what can be considered an original and innovative theory. The presentation testifies to the coherent unity of the Russian psychologist's research work. However, Vygotsky emerges from this text as a social interactionist, and the reader is led to reflect on the possible effects of the interaction between a mother and her child on the child's learning.

A citation can be used to support this perspective. It is taken from Chapter 5 of *The History of the Development of the Higher Mental Functions* (Vygotsky, 1931/1997), which Vygotsky reproduced in a late text (Vygotsky 1934/2012, p. 241) and of which only some parts were taken to constitute Chapter 6 of *Mind in Society*:

> Every higher mental function was external because it was social before it became an internal, strictly mental function; it was formerly a social relation of two people. The means of acting on oneself is initially a means of acting on others or a means of the action of others on the individual. (Vygotsky, 1931/1997, p. 105)

Out of this citation have come the understanding and articulation of the higher mental functions as having a social origin. Therefore those reading the citation could find it necessary to investigate which social conditions allow and favor the intellectual or cognitive development of the child. Without adding any more information, Vygotsky's argument can be legitimately interpreted as an invitation and an encouragement to continue a research program that he would certainly have designed and that he couldn't carry out because of his premature death. Many Anglo-Saxon researchers have intended to continue this research program by developing a sociocultural approach to the psychological development of children (for example, Wertsch, del Rio, & Alvarez, 1995).

Nevertheless, this interpretation is founded on only one notion (the zone of proximal development) and one book (*Mind in Society*). It can be discussed, even debated, on the basis of an analysis of *The Collected Works of L. S. Vygotsky,* whose six volumes appeared in English between 1987 and 1999 (and between 1982 and 1984 in Russian). In this collection, we have the full texts of Vygotsky's works, in which we can see the diversity of his topics and the unfinished character of his works. On the basis of reading these texts, another (second) interpretation has emerged.

Pursuing this line of investigation, we can define several stages of the evolution of Vygotsky's thinking about the development of higher mental functions (Minick, 1987). Based on significant reappraisal, three different phases have been proposed (Chaiguerova, Zinchenko, & Yvon, 2012). The first phase is centered on the instrument. A paper about this premise was published in 1928 in the Russian journal *Pedagogy*, then translated and published in English the year after (Vygotsky, 1929/1994), and recently translated into French (Vygotsky, 1928/2012). Works related to this stage have been compiled in *The History of the Development of the Higher Mental Functions* (Vygotsky, 1931/1997). In the second phase an interfunctional relationship of higher mental functions is suggested; although Vygotsky re-

lates this work to the separate examination of mental functions, in one of the last chapters he demonstrates that these functions make up a system. As a result, a new version of the research program is succinctly set forth in *On Psychological Systems* (Vygotsky, 1930/1997). This program is extended in a posthumous text (Vygotsky, 1934/1960), on which Luria claims to have based his research in neuropsychology (Zinchenko & Pervichko, 2012).

Finally, a third phase, discernible from 1932, is characterized by the importance of language and semiotic processes as an explanation for the genesis of consciousness. Chapter 6 of *Thinking and Speech* (Vygotsky, 1934/1987) proposes a synthesis, based partly on Sakharov's work (1930/1994), of the development of children's thinking as a process of the internalization of declarative concepts and, as extended in Chapter 7, the exteriorization of thought in language.

Approached in this way, the central theme is maintained from beginning to end: the emergence of consciousness and the role of social interactions are to be understood as a backdrop, never as a primary subject (Schneuwly, 2012). This second reading places the transmission and the internalization of declarative concepts at the center of Vygotskian studies. The French-speaking scientific community has contributed particularly to this chronological reading of these texts (Brossard, 2004; Schneuwly, 2008a, 2008b; Yvon & Zinchenko, 2012).

Consequently, we find ourselves confronted with two different readings of Vygotsky's work. This controversy is quite healthy and allows for renewed reflection on Vygotsky's research. In addition, we face a debate between two conceptions of education: a school that transmits knowledge or a school that seeks to rearrange learning situations in order to permit pupils to learn as agents with their peers' collaboration. When situations are rearranged in this way, the pupil's activity is based on the resolution of authentic problems that challenge and raise intelligence. The protagonists of these two interpretations work in different geographic areas and also in different languages. This simplified distinction between Anglo-Saxon and French studies (Brossard & Fijalkow, 2008) merits a Russian mediator.

It is tempting to take this stimulating debate back to its original context, the USSR. What was the interpretation of Vygotsky's work, particularly in the pedagogical field? A first clue can be immediately identified: the texts that compose *Mind in Society,* published in 1978, on which the first interpretation was founded, were carefully selected by Alexander Luria, who had an excellent knowledge of his "mentor's" texts. So, the sociocultural interpretation was, if not guaranteed by Luria, at least prepared, even anticipated, by him. If we integrate Stetsenko's (2002) texts into the debate, thereby expanding the discussion about the complementary relationship between Piaget and Vygotsky to Zuckerman (2007), a colleague of V. V. Davydov, who proposed an interactionist analysis of the ZPD, we enrich the debate and grant a certain advantage to a sociocultural interpretation of Vygotsky that was supported and developed in Russia as well.

Have we really read Vygotsky incorrectly? In order to answer this question, it is necessary to make a detour through the genealogy of his ideas in an attempt to approach, as faithfully as possible, the immediate posterity of Vygotskian views on education and pedagogy.

Four pedagogical movements claiming to adhere to the Vygotskian tradition can easily be identified:

1) Developmental Learning Theory (the Elkonin-Davydov System) (Davydov, 1986/2008)
2) Concept Formation Theory of N. A. Menchinskaia (Bogoyavlensky & Menchinskaia, 1959; Kabanova-Meller, 1962)
3) Orientation and Programmed Teaching Basis (Galpérine, 1966; Talyzina, 1980)
4) Teaching system of Zankov (1977a, 1977b)

Hereafter, we will settle specifically on the first two theories, always focusing on the debate between a sociocultural interpretation of Vygotsky's work and an interpretation focused on instruction and transmission.

Developmental Learning Theory (the Elkonin-Davydov System)

Davydov seems to have discovered what his thinking owed to Vygotsky when he reedited in 1991 a text written by Vygotsky in 1926: *Educational Psychology*. This reading allowed him to find several pedagogical principles that he shared with Vygotsky: collaboration in class and the notion of the ZPD. He notes, "According to Vygotsky, a teacher can intentionally bring up and teach only through continual collaboration with them [pupils] and with their social milieu, with their desires and readiness to act together with the teacher" (Davydov, 1995, p. 17). The collaboration between an adult and a child is a factor of development. Such an interpretation of Vygotsky is very close to the sociocultural approach.

Now, some elements of this approach have to be emphasized. Davydov's affiliation with Vygotsky passed first through Elkonin, who, in collaboration with Vygotsky, developed research about the role of the game in preschoolers (Elkonin, 1989/1999). The Elkonin-Davydov system exploits this work, taking the game as a model: in a game, children let their imaginations fly, following their own wishes, and they thereby appear to enjoy complete freedom (Davydov, 1986/2008). The Elkonin-Davydov teaching system uses the game as a pattern for activity by setting up the learning conditions in such a way that the activity of learning acquires the same properties as the game. In so doing, Davydov and his colleagues transposed to school-age children a process of learning that Vygotsky reserved for preschoolers (Vygotsky, 1933/2012). This learning system consists of creating the illusion that the children follow their own programs when in fact they follow a program that has been arranged within a specific curriculum. Thus, the reference to Vygotsky's work is made at the expense and through the erasure of the specificity of learning at school age.

In a very tight discussion, Davydov (1972/1990) analyzes Chapter 6 of *Thinking and Speech* and argues for the significance of the distinction between scientific concepts and ordinary concepts. Scientific concepts are not "really" scientific: they are taught concepts, formalized for teaching and held to their definition. They are not real concepts, as they exist only in language. On the contrary, ordinary concepts can be said to be systematic.

From this point of view, there exists in Vygotsky's work a generalization by induction versus a generalization by the systematization of settings on the logical coherence of experience (scientific theory). Davydov rejected this statement because the scientific concept conceived by Vygotsky is a scientific generalization, while the kind of generalization that Davydov refers to is a generalization in the activity. It is important then to find the "good" activity, in which the pupil is able to produce this spontaneous generalization. Davydov (1972/1990) reproaches Vygotsky for his nominalism and eliminates the conception of the transmission of scientific concepts that permit children to access the next stage of their imminent development. Davydov judges this position as incompatible with an activity theory in which he places his work as a legacy from Leontiev via Galpérine. He turns then toward S. L. Rubinstein and Piaget in order to propose an operational learning theory.

Therefore, our interpretation is clear: the work about teaching and about the conception of an alternative curriculum is supported by an activity theory specific to learning. In fact, it is incorporated into the Kharkov School and Leontiev's work. Later, for obscure reasons, Davydov (1995) tried to take advantage of the growing interest in Vygotsky's work by clearly proclaiming himself to be his successor from the point of view of educational themes.

However, a detailed review of his intellectual itinerary, of his work, and of his theory reveals to us many differences. It is an adapted Vygotsky that Davydov presents in those texts read by Anglo-Saxons. This confluence occurs outside the reading of Chapter 6 of *Thinking and Speech*, residing rather in a decontextualized interpretation of the ZPD; this interpretation is disconnected from the problem of the transmission of academic knowledge, and it makes the ZPD a social space where the actions of the teacher and peers is interpreted as an activity of sharing that guides the child's discovery of the objects of knowledge. This understanding is made possible totally on the basis of *Mind in Society* (p. 26) but does not stand up to a chronological reading of *The Collected Works of L .S. Vygotsky* and of *Thinking and Speech*.

That an author can be the object of multiple interpretations is quite correct and necessary. The literature provides evidence of a proliferation of thinking around Vygotsky's work, and nobody would find this proliferation regrettable. It is certainly a source of creativity and innovative ideas. Nonetheless, it is more problematic to take hold of authors and make them assume positions that they themselves would refuse. Internationally, Vygotsky's name is so recognized that it is enough to invoke the memory of a "cursed" psychologist, as we can invoke the names of painters or poets who were criticized and insulted when alive and whose deepness we sadly discover only many years after their disappearance.

Is another interpretation of Vygotsky possible? We referred earlier to Zankov's teaching program; although unfamiliar in Europe, it was officially recognized before the Elkonin-Davydov system. Galpérine's program is more familiar to most researchers, but we do not have the space here to demonstrate that this educative framework owes more to activity theory and to the concept of psychic reflection than to the ontogeny of the mental functions of the child through the internalization of social instruments. So, to further our debate, we will briefly describe the work of Menchinskaia.

Concept Formation Theory

The situation of Natalia Menchinskaia (1905–1984) is somewhat unusual. She is not very well known in the West. She was nevertheless a member of the editorial board of the review *Soviet Education,* which became in 1991 *Russian Education and Society*. She also headed the primary-school section of the Methodological Teaching Council of the Ministry of Education of the USSR and led the Laboratory of the Psychology of Learning and Intellectual Development in the Psychology Institute for almost forty years. Unlike Davydov, she worked directly with Vygotsky and completed and defended, under his supervision, her dissertation on the development of schoolchildren's arithmetic skills. A certain mystery surrounds her if we look at the existence of her work outside Russia: she was one of the founders of educational psychology in the USSR, but we can find only a few of her texts in foreign languages.

It would obviously be too easy to dwell on these respective indirect and direct associations with Vygotsky in an attempt to declare whether Vygotsky's works were inaccurately or faithfully appropriated. We are more interested in comparing and measuring the difference between Menchinskaia's works and those of Davydov.

These scholars use the same references, but are their interpretations different? If they are, uncertainties and hesitance in the comprehension of the texts of Vygotsky would also exist in Russia because they would reflect the same tension as that existing between the French approach and the Anglo-Saxon one.

The works of Menchinskaia were severely criticized by Davydov and Galpérine (Iakimanskaia, 1996). In fact, she stayed away from the activity-theory mainstream (Menchinskaia & Saburova, 1967), and for this reason her works suffered from having less exposure abroad than those of her contemporaries. She was also attacked for the empirical character of her methods (Iakimanskaia, 1996).

By reading Menchinskaia's article published in 1966 in *Psychological Research in the USSR*, we can understand why it provided ammunition for her opponents: Menchinskaia accumulated considerable amounts of research data, but the results are difficult to generalize. The disordered character of these results can destabilize and disconcert readers compared with the results of other Russian authors. More precisely, it is not easy to discover a systematic theory of teaching in her works, and it is very possible that she did not develop one.

Thus, she was not a theorist but a researcher trying to accumulate data in order to enhance her understanding of school-age developmental processes. Furthermore, she adopted a starting point opposite that of Davydov while she was trying to further her comprehension of what was happening in pupils' minds. Relying on the title of one of Vygotsky's late articles, we could qualify her work as the pedagogical analysis of the pedagogical process (Vygotsky, 1933/2012).

What was her research program and its object? They are very often explicated in the simplest possible way: to discover the laws of the assimilation of knowledge in the process of education. Her goal was to follow the process of assimilation (*usvoenie*), a concept that she introduced into Russian psychology (Iakimanskaia, 1996, p. 80).

We therefore must compare her research with the research program established more or less by Vygotsky at the end of his life:

> Pedagogical analysis will be always oriented towards the interior and will be like research using Roentgen rays. It must clear up for the teacher how the processes awaken[ed] by school teaching take place in the mind of each child. To discover this internal genetic network of school disciplines is the first task of pedagogical analysis. (Vygotsky, 1934/2012, p. 246)

It's impossible not to recognize Menchinskaia's research object in Vygotsky's quotation. She indeed endeavored to follow, as much as possible, the internal processes and the stages of the assimilation of school knowledge in the mind of every child.

> She started a systematic cycle of studies investigating the problem of the relationship between instruction and intellectual development, designed to discover the actual mechanism by which the subject content that is provided by instruction is turned into individual knowledge, abilities, and skills as personality formations. (Iakimanskaia, 1996, p. 80)

For this purpose, Menchinskaia proposed to distinguish among concepts such as teaching (*obuchenie*) and learning (*uchenie*) (Iakimanskaia, 1996, p. 79)

Nevertheless, it is difficult to discover these famous laws of assimilation in a formalized way in her work. Rather the work produces descriptions and highlights the variability of the processes and their dependence on the child and the subject content. The variability of the data prevails over their systematization: a step described by her contemporaries as empirical, as we have seen.

She seems to restore Vygotsky's program from where he left it: to follow the effects of formal learning in child development:

> The task of the specialist in pedagogy who analyzes the subject of the natural sciences is not to check what the child understood or did not understand from a lesson. His task is to show the ways of the interior process of the development of concepts in one or another discipline by which the child has to pass under the influence of the teaching of the social sciences or the natural sciences. (Vygotsky, 1933/2012, p. 166)

While following the process of the assimilation of didactic material closely, Menchinskaia was faced with the difference between learning and intellectual development: children learn scientific concepts, are able to recall them and use them during an examination, but, in natural situations, in fact, ordinary concepts are mobilized. For example, a child who is asked to draw a right-angled triangle will represent it with a right angle at its base. If it is presented differently, the child, who attaches importance to the typical representation of the geometrical figure rather than to its essential characteristics, cannot recognize it: a square represented by its top is taken for a rhombus, and a straight line is always horizontal. Thus, the mechanism of assimilation of the subject content lets us see a gap between school learning and true assimilation. The work of Menchinskaia provided evidence of these defects of assimilation and of differences in assimilation depending on the teaching method.

One of the reasons for this gap is the constant conflict between scientific concepts and the ordinary concepts used and learned by the child outside school: academic knowledge does not replace daily representations. Sometimes, "spontaneous" knowledge enters into competition with school knowledge; sometimes they even coexist: the pupil mobilizes academic knowledge to answer questions on an examination, but, in a natural context, the pupil continues to use previous associations. However, according to Menchinskaia, "[these] facts … are the direct extension of the work undertaken by L. Vygotsky and his collaborators on the problem of the dialectic of scientific concepts and empirical concepts" (1966, p. 359).

This tension between academic concepts and the concepts of everyday life is also illustrated by difficulty in distinguishing essential properties from secondary characteristics. For example, Menchinskaia found in her studies that concrete content is often an obstacle to the assimilation of academic knowledge. An experiment with a control group showed indeed that the group that had the advantage of direct and abstract teaching succeeded better in solving exercises than did the group that obtained strong empirical scaffolding during the lesson. Abstract learning made it possible to structure thought and to orient it toward the resolution of problems. Such facts directly contradict Davydov's proposal to place school students in a problem situation in which the solution bypasses the formulation of an abstract principle. According to Menchinskaia's research data, one does not facilitate schoolchildren's learning by doing that but by making the problem situation increasingly complicated. The assimilation does not go from the top to the bottom but follows a complex path. "There is a movement that happens simultaneously in two opposite directions: the object towards the word and from the word to the object, i.e., the abstraction and the concretization take place at the same time" (Menchinskaia, 1966, p. 355).

The laws and the capacity for assimilation of school content are different from one child to another. It is irresponsible to propose the same method of appropriation for all pupils, who do not follow the same stages in their appropriation of knowledge. Menchinskaia thus set up and worked out strategies of learning that tried to compensate for defects in aptitudes. She developed tools for diagnosing the whole personality and not only separated functions.

One last aspect of her work deserves special attention: the development of thought according to subject content. The research program that Vygotsky set himself was to explore the internal processes of the development awoken by the learning of particular subject material (grammar, arithmetic, social sciences, natural sciences, and so forth). Therefore, it was important to take into consideration the disciplines and their characteristics in the assimilation of knowledge:

> Each school subject has a particular and concrete relationship to the development of the child, [a] relationship which varies as the child passes from one stage to another. That guides us to examine again the problem of the formal discipline, in other words, the role and importance of each particular material for the general intellectual development of the child. The problem cannot be solved by a formula [alone], but a vast field comes to light here to undertake concrete, wide and varied researches. (Vygotsky, 1934/2012, p. 247)

Therefore, Menchinskaia took up "the study of the more specific laws of the thought activity, conditioned by the contents of the taught material" (1966, p. 365). The meticulous examination of these works obviously exceeds the limits of this article.

The educational topics approached by Menchinskaia are diverse but nevertheless they concentrate especially on the question of the assimilation of school content and its variability according to the subject and the aptitudes of the child. Her work can be regarded as empirical but also atheoretical: in her work are references not only to Vygotsky but also to Rubinstein (the internal conditions) and Pavlov. Her endeavor is the opposite of Davydov's because she focuses her work on the distinction between scientific concepts and ordinary concepts. The whole meaning of this encounter is to know how to take into account the daily experiments of the child in school activities. On the contrary, Davydov did not subscribe to this distinction and sought to support another type of generalization that fits into the school activity of pupils and does not start from the knowledge transmitted by the teacher.

Conclusions

By limiting us to these two approaches of research, the conflict between several interpretations of the works of Vygotsky in educational psychology seems to have its equivalent in the discussions held by researchers in the USSR. One of the approaches has benefited from broad dissemination in the English language, whereas the other is little known outside the former USSR. One of them focuses on the assimilation of knowledge and fits into an outlook that could be called didactic. The other is focused on the activity of the schoolchildren and fits into an outlook that one could describe as psychopedagogic. Between these two approaches remain the works of Vygotsky, which we have to learn and read again and again in an attempt to unravel, as far as possible, the claim that he intended to make.

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