

Vygotsky and intersubjectivity

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Lev Vygotsky's statement on the development of the higher psychological functions—from the interpsychological form to the intrapsychological form—is discussed in the article. I describe the changing of Vygotsky's interest from nonverbal to verbal communication and his emphasis on verbal communication as an only kind of interpsychological function. I then analyze works that show the importance of nonverbal communication in this process. I raise the questions of what an interpsychological function is and who is its "owner." I argue that immediate response to the behavior (verbal and nonverbal) of another person is a basis for the psychological functions of a child, and this basis continues to influence processes in later stages of human development, including adulthood. Thus, interpsychological function in the development of the child is inevitably connected with some kind of passivity in reactions to social stimulation.

Keywords: interpsychological and intrapsychological functions, ontogeny, intersubjectivity, communication, dialogue

Vygotsky's Main Formula

"Every function in the child's cultural development appears twice: first, on the social level, and, later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals" (Vygotsky, 1960*/1983: 145; see also Vygotsky, 1978). This passage from Lev Vygotsky's "The history of the development of higher mental functions" is one of the most often cited from his works. It is his principal formula, and one may find dozens of similar propositions in his other works. For reference I call this proposition his Main Formula. It is not clear what exactly "interpsychological" means in this formula. The purpose here is to clarify what it *could* mean.

With the help of his Main Formula, Vygotsky tried to accomplish two tasks at once: to describe the parallel processes of (1) the internalization of psychological

* The text was written in 1931.

function and (2) the acquiring of behavior. Is it necessary for both processes to be connected with language?

Vygotsky's interest in the "sign without meaning" (for example, tying a string around one's finger as a reminder) and in children's pointing gestures in his early works shows that the process of behavior acquiring may be connected with non-linguistic signs. Later his interest shifted. Why? Why did Vygotsky in his texts that were published later interpret "interpsychological" as a special kind of communication by means of language, as the order to do something? Many examples can be found to confirm this tendency. This is one of them:

As a person masters the action of external natural forces, he masters his own behavior using the natural laws of this behavior. At the base of the natural laws of behavior are the laws of stimuli-response, so one cannot master the response while one has not mastered the stimuli. Hence, the child acquires his behavior, but the key to this process is in acquiring the system of stimuli. (Vygotsky, 1960/1983, p. 154)

The Main Formula now becomes:

Each system I speak about goes through three stages. The first is the interpsychological—I order, you execute; then the extrapsychological stage follows—I begin to order myself; and then the intrapsychological stage comes—two brain elements that are activated by external stimuli show a tendency to perform as a whole system and become an intracortical element. (Vygotsky, 1982*, p. 130)

The reference to physiological processes here is absent in the previous version of the Main Formula. And he goes further. It is impossible to understand all aspects of Vygotsky's motivation for writing the following (I tend to think that ideological pressure was one of the causes):

Let a psychological process move a brain atom a distance of one micron—and the energy-conservation law is crushed, and we shall have to give up the main principle of natural science, which [our] entire present-day science is based on. So we have to suppose that our acquiring our own behavioral process is in essence like our domination over processes that take place in Nature. A person living in society is always under the influence of other people. Speech, for example, is one such powerful means of affecting another's behavior, and it is natural that a developing child acquires the same means that others use to conduct his behavior. (Vygotsky, 1983, p. 279).

The argument about the energy-conservation law shows that Vygotsky in his Main Formula had an interest in solving the body-mind problem in such a manner. It is difficult to agree that the mind can easily move a brain atom by means of a voice order. To give a voice order, one has to move some atoms of the vocal apparatus, and one has to do so, of course, not by means of a voice order to these atoms.

So the scheme of acquiring one's behavior by means of a language order does not help us to solve the body-mind problem, but this scheme may be to some extent empirically true. I say "to some extent" because using language for a com-

* This is the first publication of the text written in 1930.

mand to oneself is possible only for a person who can speak. One-year-old children are already included in intersubjective relationships, and they get their new psychological functions only in that process. I mentioned above Vygotsky's previous interest in the "sign without meaning" and in pointing gestures. His interest in these phenomena shows that he moved from a wide question about a psychological function that occurs between people in any communication to a limited question about higher psychological functions and their connection to language communication only (some details of his changing interest can be found in Akhulina, 2004).

"Intrapsychological" as a form of "interpsychological"

So I assert that Vygotsky's change of interest led him to disregard an important question that was presented in an earlier version of the Main Formula. Let us consider one Russian attempt to come back to the lost question of the interpsychological. In the middle of the 1980s, Kovalev and Radzikhovskiy (1985) published their article on communication and the problem of internalization. Now it is almost forgotten; I find that only a few of my colleagues mention it. Maybe the ideas were not developed because of Kovalev's early death. As for Radzikhovskiy, who was the favorite disciple of Vasiliy Davydov, he became a popular political analyst at the time of perestroika and abandoned his scientific career.

The question of what *interpsychological* means is the central question of Kovalev and Radzikhovskiy's article. They assert that the evolution of the notion of internalization in Soviet psychology was dramatically predetermined.

The fact that the theory of the step-by-step formation of mental actions [by Pyotr Gal'perin] had taken the place of internalization theory is not accidental. The transition to such a theory and, especially, the departure from Vygotsky's opinion of internalization was inevitable. The reason is the critical part played by communication in Vygotsky's opinion. Neither Vygotsky himself nor his followers could develop the notion of communication. The way out was found in dissolving the connection between internalization and communication (Kovalev & Radzikhovskiy, 1985, p. 114).

The Russian word *obshcheniye*, which we translate as *communication*, has an important connotation that is lacking in the English word. *Obshche* can be translated as *common*, but this meaning is not expressed in English as clearly as it is in Russian. The meaning of *obshcheniye* in Russian is "to forget the Self in the process," "to share oneself with the Other." This is the key for understanding what G. Kovalev and L. Radzikhovskiy said. They stated that the difficulty is that the function, being between two individuals, being interpsychological, cannot be attached to a single individual. But who is such a function's "owner"?

Either we consider the psychological function as individual, and then "communication" has only a commonplace psychological meaning: communication (like any other factor) influences the psychological function from outside. Or the psychological function exists in intersubjective space, and then, keeping its structure essentially

intersubjective, it is internalized, determining the basic structure of the human mind. The second variant contradicts tradition and requires a new methodology of psychological analysis to be developed for its support, such that the events that happen in intersubjective space can be given a real meaning (Kovalev & Radzikhovsky, 1985, p. 118).

The authors suppose that the problem can be solved through developing a dialogical approach to communication.

There has to be a universal analysis, embracing not only the cases where dialogism “is not hard to plumb” (double consciousness, specific inner dialogues described by F. Dostoevsky and analyzed in detail by M. Bakhtin), but the whole set of psychological phenomena—if we assume that the dialogism is an intrinsic component of the basic structures of consciousness.

To do this, it is necessary to build a real typology of all (both explicit and implicit) inner dialogue forms; to describe in detail their common structural-genetic basis, as well as the differences between those forms; and to explain the origin of these differences. In each case, it should be shown what new benefits can be really gained from the analysis of the appropriate phenomenon as dialogical in its structure. (Kovalev & Radzikhovsky, 1985, p. 120).

My purpose here is like that of the above authors, although not so wide. I take a restricted class of dialogical phenomena—that is, only the phenomena of non-linguistic communication. My interest is not in building the typology; it will be enough to describe a set of prototypical examples. These are examples that show that our mind’s life often is not our sovereign territory, as M. Bakhtin wrote. As my interest is mainly in nonverbal dialogues, I abandon also the dialogism of Bakhtin, who tended to describe the inner mind’s life as the fight of ideas that can be expressed in words.

Now I shall develop the approach of H.J.M. Hermans (2001), who wrote that “dialogical relationships are to be restricted neither to internal mental processes nor to verbal communication only, but can be considered as embodied, spatialized and temporalized processes that start from the beginning of life” (p. 266), and “the actual Other questions, challenges and changes existing positions in the self, and is able to introduce new ones” (p. 255). The following strong proposition can be considered a summary: the content and even intentions of my consciousness are not purely mine from the very beginning of my life.

Aleksey Leontiev and Evald Ilienkov: Mediation by instrument

Vygotsky set up the problem of interpsychological forms of psychological functions, but he could not solve it because his interest shifted from communication of any kind to verbal communication alone. Now let’s consider the approach of one of Vygotsky’s followers: the activity theory of Aleksey Leontiev, who took a step toward research on nonverbal behavior.

Leontiev (1975, p. 97) wrote:

The instrument [of labor] mediates activity relating to an individual not only with the world of things but also with other people. Because of this mediation, one's activity assimilates humankind's experience. Accordingly, the psychological processes of an individual (his/her "higher psychological functions") acquire a structure containing, as an inevitable part, culturally and historically formed means and methods transmitted to him/her by others in the course of collaboration and communication. However, it is impossible to transmit a means or a method of an activity otherwise than in some external form—the form of action or the form of external speech.

There is an important contradiction in this small fragment. The first sentence asserts that communication between people is not immediate. The mediator is an instrument. The fourth sentence asserts that the instrument needs to be transmitted from the person to another one who internalizes the corresponding meaning with the help of it. Does this sentence mean that (the action with) the instrument is transmitted immediately (in contradiction to the first sentence)? Leontiev continued:

Higher psychological processes, specific for humans, may appear only in the communication between individuals, that is, as interpsychological. And only after that can those processes be performed by the individual alone, and so some of them lose their original external form, transforming into intrapsychological processes (p. 97).

As we see, Leontiev repeats here Vygotsky's Main Formula, so he considers the passage cited above in regard to it.

The Soviet philosopher Evald Ilienkov expressed a more definite position. He developed his Activity Theory in parallel with Leontiev. We can even say that Ilienkov, in close contact with Leontiev, gave a sound Marxist basis for his Activity Theory. He tried to solve the problem of transmission of mental function by developing, as he insisted, the approach of Benedict Spinoza. He asserted that the individual, from the very moment of birth, acquires a universal ability: "The proper, specific form of action of a thinking being is its universality.... The individual—a thinking being—builds his movement conforming it to the form of any other thing" (Ilienkov, 1984, p. 38).

Ilienkov tried to build a theory to correspond to his version of Dialectical Materialism. According to Ilienkov, a system of ideal meanings is "attached" to cultural things, and the subject reads these meanings when acting with these things and conforming his acts to their form (having a universal ability for such "reading" activity). Such an approach does not require any "interpsychological" phenomena at all (in either a verbal or a nonverbal form). It requires only that the subject be able without any help to "decipher" the things of culture—any things of any culture, inasmuch as these things carry cultural meanings.

The deep enigma of interpsychological functions and intersubjective communication was solved by Vygotsky, Leontiev, and Ilienkov with different emphases. The emphasis on language mediation reduces Vygotsky's ability to deal with earlier forms of the transmission of communication and psychological function. Leontiev's approach fluctuates between two options: either to admit the immediate transmission of action from an adult to a child (and it is not important here whether the

action is with an instrument or without it), or to consider the instrument not as a mediator in the direct sense but as a thing that is sufficient to transmit the meaning, forgetting about the interpsychological. Ilienkov developed just the second option, and his theoretical description of development is to some extent similar to an empirical description of the development of autistic children. What is in deficit in autistic children is simply the ability to be engaged in some immediate relationship with an adult and later to have “triadic” relationships with an adult and some object. The details are presented below.

**Immediate reaction and joint attention as forms of communication:
What does it mean to be “moved”?**

I identify joint, or shared, attention as a focus of my interest in psychological research on early ontogeny. Because of the great interest of philosophers in such research, it might be better to call such research psychological and philosophical.

N. Eilan (2005) wrote that to consider a process involving two persons as “joint attention” is possible only provided that

- there is an object that both persons are attending to
- each person is aware of his/her own perception of the object
- both persons know that the other person perceives the object
- there is some causal connection between their acts of attention to the object

Eilan also wrote that it is necessary for the persons to understand the concept *attention*, but that seems superfluous to me. The last item on the list of conditions is important. Acting with the same object an adult and a child may be in joint attention or they may not be in it. The critical point of the activity theory of ontogeny is located just here, and it is important that both variants be actualized in the development processes. The adult shows to the child an operation with an instrument or other object, and the child—in connection with this showing—acts and masters the action. Or, conversely, he/she acts with the object without paying attention to the adult’s operation. So the triadic relations may be different.

From the viewpoint of the research that we are speaking about, triadic relations are a rather “late” psychological structure, which is necessarily preceded by important events that possibly explain these differences. First, children in the first days of life and even in the first hours of life show reactions that may be important for the future development of their relations with adults. As A. Meltzoff & M.K. Moor (1977) shows in his well known experiments, such a child responds to an adult’s smile by contraction of mimic muscles, which are involved in smiling. A child may also repeat finger movements, and so on.

Second, some kind of joint attention appears in the second part of the first year: the child turns his head and tracks the direction of his mother’s (or other adult’s) gaze. Later the child can repeat simple acts. After the first year, the child can repeat not only the adult’s action but also the adult’s intention. If an adult expressly makes unsuccessful attempts to perform some act (for example, tries to insert one object into another), the child can repeat the act, achieving success (Tomasello, 2008). M. Tomasello notes that chimpanzees nurtured by humans demonstrate the ability to repeat acts of humans also.

Third, the immediate communication of a child with an adult, beginning from the middle of the child's first year, is well known to every parent and has been described by scientists many times. Emotional exchanges are adjusted in these processes with the help of an eye-to-eye gaze, mime, and vocalization. Sergienko wrote: "Communications of all these kinds are perceived immediately and do not require special conscious interpretation. This is a 'toolbox' for nonverbal communication, and cycles of intersubjective communication are based upon it. Interpersonal perception functions from the very birth" (2012). What is that immediate intersubjectivity? What is its relation to the automatic reactions of a newborn child? Who is its owner? Who is active in this act?

Let us consider the situation in which a child repeats an adult's smile. As many authors insist on the absence of an exact me-and-world differentiation in a newborn, we may suppose the absence of a distance between one's mimic response (which we can consider as automatic) and the feeling that accompanies that act. In that case, the automatic act is the act of a psychological function that has no single owner because it is initiated by the adult and continues in the child. This initiation may be a conscious and purposive act of the adult, which causes a feeling of pleasure in the child. Such immediate reactions form a basis for the immediate perception of the emotional state of other people.

The philosopher and psychologist Peter Hobson wrote (2005, p. 190):

To perceive a smile as a smile (to take the simplest example) is to respond with feeling, in such a way that through the smile one apprehends the emotional state of the other. In other words, there is a mode of feeling perception that is critical for establishing intersubjective relations between people, and it is a kind of perception that establishes a special quality of relatedness between the individual and what is perceived—in most natural circumstances, a person.

So we may call the immediate automatic reaction of a child the organ for smile perception. As a child's conscious perception of the external world is based on the organs of perception that are parts of her/his body so "an infant's awareness of sharing a subjective orientation with someone else is founded on early-developing propensities to identify with the bodily expressed attitudes of others—a special form of interpersonal engagement involving feelings" (Hobson, 2005, p. 190). The word *identify* is too strong—not because I insist on some distance between a subject and the automatic reactions of his/her body but because a subject appears and develops as a wholeness of passive engagement with intersubjective processes and an active influence on these processes.

Hobson used the exact phrase "to be moved" to describe one side of such a process. He wrote that at a certain stage "the infant engages with someone else's engagement with the world—and is 'moved'" (p. 188). The subject acquires an interpsychological function that is basically without-subject automatism and develops it as a whole inter-intrapsychological function, which allows the subject to understand the other person and to be engaged in the other's intentions.

J. Roessler (2005, p. 257) points out another important detail: when direct, immediate contact between a child and an adult develops to a triadic interaction, then the child does not simply repeat and copy the adult's joy but transfers joy to a com-

mon object. Roessler supposes that other aspects of understanding develop in the same way: Hearing some proposition P from an adult, the child is “moved,” and the thought P is directly induced in his/her mind, but the child is now able to resist being saddled with the belief that P, by prefixing this thought with the concept “she believes that ...”, or “she is telling me that ...”. So, according to Roessler, the ability to share attention and intention is the basis for understanding both psychological states and language propositions.

It is easy to understand why researchers of early ontogeny are interested in development deviations. One of the major problems in this field is autism. There is no agreement among researchers regarding the basic violations that determine the further destiny of a person with autism. A hypothesis is that the basic violation is an in-built weakness in orienting to social stimuli, such as a smile, mime, and so on (Leekam, 2005, p. 222). Autistic persons abdicate the possibility to be to some extent passive in a communication, to be moved. As I wrote above, their situation is more similar to Ilienkov’s theoretical description of child development the less they are able to be passive in such a way.

The owner of intersubjective functions

People with autism develop almost completely out of immediate relationship with the Other. A person with autism is a self-sufficient subject, in contact only with the world of objects, and an adult as an educator may only change and configure this world. This is not enough for normal development. It is clear that in Vygotsky’s Main Formula, the interpsychological has to include some kind of immediate influence of one person on another. How can such an influence take place?

The question raised belongs to the sphere of philosophy. I will answer it as phenomenological philosophy answers such a question, interpreting “how” as “in what forms.” This approach allows us to see another, more important problem closely connected with the question of the owner of interpsychological function that was raised above.

I repeat a citation from above (Kovalev & Radzikhovsky, 1985, p. 118): Either we consider psychological function as individual, and then “communication” has only a commonplace psychological meaning— communication (like any other factor) influences the psychological function from outside—or the psychological function exists in intersubjective space and then, keeping the essential intersubjectiveness of its structure, determines the basic structure of the human mind when internalized.

Kovalev and Radzikhovsky add that the second variant contradicts tradition and requires new methodology. My work may be considered an attempt to develop such a methodology. Relying on philosophers of the 20th century, I argue that there is no sole owner not only of interpsychological functions but (radically speaking) of intrapsychological functions too. These functions may be considered as being in the individual’s body, but they may be used not only by the person whom we think about as the owner of the body. Other people can immediately influence them too.

We shall discuss now the subject who does not completely belong to himself—as opposed to the person with autism, who is self-sufficient. We shall follow J.-P. Sartre and M. Merlo-Ponti. Here we are interested not only in a child but in a normal adult as well.

Sartre notes that the main mistake of his predecessors is their considering the relation between the Subject and the Other as concerning *knowing* only. He insists that this relationship is mainly that between Being and other Being. In his book *Being and Nothingness* (1943) a minimal form of such a relationship is described. It is the influence by gaze. Sartre writes that a person who merely looks at me changes my conscious state immediately.

Sartre describes the situation of the sudden appearance of shame when a man does something that is not allowed by the rules of decorum. Immersed in his task, he supposes he is alone, but suddenly he sees himself under somebody's gaze. The shame that overtakes him shows that his subjectivity as such has an aspect that does not belong to him completely and that is connected with the Other in a special way. Sartre's formula is as follows: "To be seen constitutes me as Being undefended against the freedom that is not mine" (Sartre, 1943/2000, p. 295; see also Sartre, 1943/1992). My shame shows that the Other's gaze is an aspect of my consciousness, but it does not belong to me completely; it has one more owner—the Other.

The Other as a synthetic wholeness of one's experience, as a will, and more—as a passion—aspires to organize *my* experience. My experience in this case is not the result of the influence of *unknowable noumenon* [Sartre uses Kant's term here], but it is the result of the constitution of coherent groups of phenomena in the field of my experience that is made by a Being that is not me" (1943/2000, p. 250).

One finds a strange preference for conflictive situations in Sartre's text. His critics often point out that the human gaze can also immediately produce a completely positive state of consciousness in the recipient. For example, the gaze can have an encouraging effect. Many other gaze modalities can be found. We may add to them different situations with voice and touching. César (2014) calls them *inter-empowerments*. The connection of this process to the Vygotskian formula is evident for her, and she calls the next stage of the process an intra-empowerment. In all these cases, the Other is the source and even intentional initiator of my state of consciousness—its co-owner.

Hence, the sovereignty and autonomy of my consciousness and my subjectivity are in doubt, and it is not surprising. If the Other has his/her own interest in my communication, then I am not an exclusive author of the states of my own consciousness in the future. Thus the relations between consciousness autonomy and deep communication with other consciousnesses are antagonistic.

Notice the essential difference between my conclusion and Leontiev's and especially Ilienkov's position. They assert that communication is in principle mediated by objects, instruments. We now see some modes of immediate communication and poly-ownership of the consciousness state. Ideally in an elementary communicative act of such a kind, one participant is an active initiator, and the other is passive to some extent. To be more exact, last one, to some extent, actively acquires one's passivity. Sartre is right: dialogue is not inner silent or external sounded talk alone; its basis is the immediate mutual influence of one being and another being. So the interpsychological form of function may be thought of only as a hybrid of the activity and passivity of a subject where the "owner" of the passive aspect is another person. This description is applicable to any combination of adults and children.

My descriptions have a deficiency: all the kinds of communication I speak about do not transfer information, whereas Leontiev talks in the passage cited above about the transfer of a mode by using an instrument. So we have to introduce into the hybrid a third effector—the object: an instrument, a tool, information in any form. Thus our unit of communication is the same as that of Vygotsky and Leontiev. It is triadic with two subjects and an object in some form. This triadic entity may be reduced to two possible forms:

- the relation “subject-object” without the presence of another subject
- the relation “subject-subject” without the presence of any object

The first form is inherent in an almost pure form in autistic development, which is accompanied by the almost complete absence of relations of the second form and hybrids.

When learning with the help of another person, we perceive information in a way that depends on the attitudes that we have toward the person teaching us. If we really develop (I mean not only as a child but also as an adult of any age) with the help of another person, this attitude includes some kind of passivity, the readiness to be changed by the teacher. It requires desisting from being equal to oneself, from being self-identical.

Conclusions

The difficulty in developing a new methodology for research on interpsychological functions is simply the difficulty of accepting that development always is a sacrifice of self-identity. As Moris Merlo-Ponti says, it is impossible really to hear the Other if we stay in the Cartesian cogito position—in other words, if we keep self-identity in communication. To develop a new methodology means to hear what Vygotsky, Bakhtin, Sartre, and Merlo-Ponti really tell us. So we can summarize:

1. Vygotsky lost the important opportunity to develop his theory of the interpsychological state of psychological functions when he abandoned his investigation of nonverbal interpsychological functions.
2. It is possible to recover that lost opportunity and to develop successfully a theory of interpsychological functions only by rejecting the Cartesian self-identical subject as a philosophical basis for the psychology of a subject and by describing the subject’s ontological dependence on the Other.
3. Psychological research of early ontogeny provides material that allows us to perceive the existence of interpsychological functions. This material can be interpreted in relation to the activity/passivity of the non-self-identical subject.

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