The problem of consciousness in Vygotsky`s Approach

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Introduction

During last three decades the name of Lev Vygotsky is mainly connected with the ideas of social origins of psyche (Diose, Staerkle & Clemence, 1996). In Soviet literature this item was focused around such problems as the relations between "cultural-historical theory of development of higher mental functions" and the activity-oriented approach in psychology (Leont'ev, 1978, 1981; Radzikhovsky, 1979), the development of thinking (Luria, 1976), formation of concepts and mental acts (Gal'perin, 1969, 1976) and forms of generalisation in education (Davydov, 1972, 1986).
In the West, observations of his approach are mainly connected with ideas of cultural development of the behaviour and activity (Wertsch, 1981), the zone of proximal development (Bruner, 1984; Brown and French,1979), the sign as a psychological tool in internalisation (Wertsch, 1984, 1991) and the development of thinking and speech (Daniels, 1993; Glick, 1983; Tryphon & Voneche, 1996).
A careful analysis of Vygotsky's approach shows that these ideas were, at least for him, no more than particular fragments, steps on the way of *creation of a theory of human consciousness*. "Psychology defined itself as the science of consciousness,"- he wrote - "but psychology says almost nothing about consciousness" (Vygotsky, 1968, p. 182).
The development of his thinking was concentrated around three research programmes:
1) consciousness as the reflex of reflexes,
2) consciousness as the structure of the human behaviour,
3) consciousness as the unit of meaning and sense.
Respectably there was an evolution in methodology in the analysis of mind: the first was the traditional "atomistic" analysis, then functional and the last was the analysis with units.

The goal of this article is to show the development of Vygotsky's ideas of consciousness in these two dimensions. This can give also the opportunity to show its impact to present-day psychology and to clear up Vygotskian perspectives as well.

Initial principles

Vygotsky's approach to the psychological explanation was based on two fundamental principles:

1. *The principle of mediation*. The knowledge about the "life of consciousness" could only be indirect. The researcher of consciousness "acts as a detective discovering a crime that he never saw" (Vygotsky, 1982, V.1, p.62). The quality of knowledge depends on the quality of the tools with which that knowledge is gained. Tools are the products of social practice in its historical development.

2. *The principle of the systemic nature of psychical processes*: Any psychical act is the act of individual and depends on the whole in the dynamics of which it is realised. Cognition of the human psyche must correspond to its nature. Because this nature is mainly formed by the two mediators between man and the world - instruments of labour and instruments of communication, the task of the scientific description of consciousness is to explain the role of these instruments in the inception and structure of all truly human psychical functions. These functions must be regarded as derived from a system of interpersonal relations including labour and language, rather than from the mind or the brain. Man's consciousness and his brain are themselves formed in this system.

The first period. Consciousness as the reflex of reflexes

In 1925 - 1926 Vygotsky believed the theory of conditioned reflexes to be a branch of psychology. He was sure that "the theory of conditional reflexes is the basis on which new psychology must be built" (Vygotsky; 1926, p. 7). There were two reasons that made the idea of the conditioned reflexes attractive.

1) It filled *the idea of causality* with new content, above all with the conditionality, which distinguished Pavlov's biological determinism from the mechanistic Cartesian schema of reflex. This idea built a bridge between *biology and history*, for history, culture and society were a "kingdom of conditionality".

2) It was connected with his idea that *consciousness is "reflex of reflexes"*. The main task was to find the reality that is *capable of determining of the appearance of the consciousness and its development.*

However, after a year-and-a-half, he had already moved away from this idea. He stressed that it was important to study not reflexes, but human behaviour, being different from the behaviour of animals. This difference is related to the appearance of

consciousness; something that exists only in man. "It is necessary to study not reflexes, but behaviour....It is necessary to change our view of human behaviour as a mechanism that is completely revealed by the conditional reflex.... Consciousness is the problem of the structure of behaviour" (Vygotsky, 1925, pp. 180 - 181).

Consciousness as the structure of human behaviour

Vygotsky did not regard the psyche as a uniquely human property, but as a special form of regulation of behaviour of living beings. Having emerged from a horde of apes and creating his social world, man inherited from his animal ancestors also the fruits of their psychical development. So, the psyche had to be explained as a factor of evolution. The starting point of this approach was manifested with *the idea of two lines* in the development of human behaviour.

Two lines of the development.

The development of the human psyche signified the transformation, under the new conditions, not only the organism as a physiological system, but also of the psychological system connected with the former. This was the basis of the postulate of two levels of psychical functions. "Faced with a child deviating from the normal human type, a child weighed down by a defect in his psychophysiological makeup, an observer...will notice at once convergence being replaced by deep divergence and incompatibility between the lines of natural development and cultural development" (Vygotsky, 1982, V. 5, p. 229). The centre of his search moved to the problem of correlation and contradictions between them in the child's real integral behaviour. "The very essence of cultural development is in the collision of mature cultural forms of behaviour with the primitive (natural) forms that characterise the child's behaviour" (Vygotsky, 1981, p. 151).

Psychical processes form the level of elementary functions which become the lower functions when the subject develops psychical functions of a higher order during his life in society. With the appearance of these, the lower functions are transformed, becoming elements of a new fusion. "The growth of the...child into civilisation usually involves a fusion with the processes of his/here organic maturation. Both plans of development - the natural and the cultural - coincide and mingle with one another. The two lines of changes interpenetrate and in essence form a single line of socio-biological formation of the child's personality" (Vygotsky, 1960, p. 47).

According to this, he formulated "general law of cultural development": "Any function in the child's cultural development appears twice or on two planes. First it appears on the social plane, and then on psychological plane. First it appears between people as an

interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary attention, logical memory, the formation of concepts, and the development of volition" (Vygotsky, 1981. p. 163).

These transformations were explained with a new basic schema of the organisation of human behaviour. A third element was included in the stimulus-reaction connection - a cultural sign as a psychological rather than a technical tool. It was this tool that became the principal instrument of transforming elementary functions into higher ones. The psychical function, originally social, is mediated by a cultural sign and becomes intra-psychical.

Vygotsky explained this with the example he saw as a model for the construction of all the higher psychical functions. In a child, the gesture of pointing is at first a failed attempt at grabbing aimed at an object and signifying action. Later, the mother perceives it as a pointing. Only after that the child himself begins to point. The mother's reaction transformed the grabbing movement into gesture, into an object-oriented tool of communication. In the case of the gesture, a muscular movement acquires an object-related meaning owing to the way it is understood by the other individual. By that token, it becomes the sign. The movement in question is a special sign operation, an instrument of affecting another individual.

When the sign points to another object, it serves as a mediator between the subject and this object. When the goal (in this case to grab the object) is achieved with the help of an adult the gesture evolves into a cultural sign - the mediator between the child and adult, between the child and object and, at the same time, a tool a child uses to control both the adult attention and his own.

The concept of the cultural development of human behaviour opens three-dimensional system of the child's individual development: the child - the object - the adult.

The elementary psychological functions result from the natural line of development and are transformed into higher psychological functions through the child's social and mediated interaction with more experienced members of culture. It was the starting point of investigation of *the problem of internalisation as the mechanism of this transformation*.

Internalisation and the zone of proximal development

The principle of internalisation traditionally representing as a process of transference of the external into the internal, had long asserted itself in psychology. (Piaget, 1926; Mead, 1934).

Vygotsky saw the relationship between external and internal activity as a genetic, developmental relationship in which the major issue is *how external processes are transformed to create internal processes.* This concept was the key to Vygotsky's

approach to the development. "It goes without saying that internalisation transforms the process itself and changes its structure and functions" (Vygotsky, 1981, p. 163).

Internalisation is primarily concerned with social processes. "When we speak of a process, "external" means "social". Any higher mental function was external because it was social at some point before becoming an internal, truly mental function" (Vygotsky, 1981, p. 162). Since personality is a product of a special form of life - the life of a collective - the functions that had for centuries been regarded as innate in the individual, must be seen as derivatives of that collective life. "The individual personality ... is the highest form of sociality" (Vygotsky, 1986, p. 54).

Internalisation was viewed as part of a larger picture concerned with how consciousness emerges out of human social life. The child uses artificially created signs as the immediate causes of his behaviour. The signs have the quality of reversibility. They can act upon the agent in the same way they act upon the environment or others. "In this ... process the direct impulse to react is inhibited and an auxiliary stimulus which facilitates the completion of the operation by indirect means is incorporated. Careful studies demonstrate that this type of organisation is basic to all higher psychological processes.... Because this auxiliary stimulus possesses the specific function of reverse action, it transfers the operation to higher and qualitatively new forms, permitting humans to control their behaviour from the outside by the aid of outer stimuli. The use of signs leads humans to a completely new and specific structure of behaviour, breaking away from the traditions of biological development and creating for the first time a new form of a culturally based psychological process" (Vygotsky, 1978, p. 40).

The overall developmental scheme begins with external social activity and ends with internal individual activity. "Formerly, psychologists tried to derive social behaviour from individual behaviour. They investigated individual responses observed in the laboratory and then studied them in the collective... The first problem is to show how the individual response emerges from the forms of collective life" (Vygotsky, 1981, p. 164-165).

Within the context of the internalisation of cognitive activities that were originally shared, interactive processes, Vygotsky introduced the concept of the *zone of proximal development.* He defined it as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p.86).

To summarise Vygotsky' view on internalisation and the zone of proximal development, two points must be mentioned.

First, internal psychical processes retain certain properties that reflect their social origins. "All higher mental functions are internalised social relationships...Even when we turn to mental processes, their nature remains quasi-social. In their own private sphere, human beings retain the functions of social interaction" (Vygotsky, 1978, p. 164).

Second, internalisation is impossible without certain psychological tools, because it is the activity-semiotic transformation. Using signs as instruments of acting on attention, memory and other processes, the child masters them in cooperation with adults or more competent peers, and transforms them into higher psychical processes.

The cultural sign as psychological tool

The transition from the concept of signal to that of sign was the basic new step in Vygotsky's work on his overall programme.

Originally that concept was born in *re-interpretation of conditional stimuli* in experiments regarding the abnormal child's behaviour. In these experiments the impossibility of operating with the oral word (in a case of deafness) of the written one (in the case of blindness) was compensated by the assimilation of another signal, namely, a physical irritant giving rise to nonviable (tactile, muscular, etc.) sensations. It was not the word that was the sign or substitute for sensation (which was now a transformed sensory signal) that became a sign of the word. The physical agent perceived by a sense organ and substituted for the word became a sign identical to language signs. The work done by a language sign consists in differentiating content entities, meanings, represented in the language system. In their turn, meanings took the brain beyond that which was given in sensations, in the sensory texture of consciousness, to that was given in concepts.

Therefore, sensory signals that assume the flesh of speech signs, help the individual that does not know oral or written speech to grow into the socio-cultural world. "It is the *meaning* that is *important* not *the sign.* We can *change the sign but retain the meaning"* (Vygotsky, 1982, V. 5, p. 74).

The sign concept brought the interaction between the world and the organism in a new causal series different from the conditional signal. The purpose of the signal was to distinguish between objects and control bodily reactions to them. Objects were interpreted as the realities of the natural environment. Their adaptation to variable characteristics was achieved by individual effort, while by using cultural signs the subject went infinitely far beyond the boundaries of his micro-experience, constructing his behaviour according to supra-individual programmes created by society and accessible to everyone.

The sign serves as an instrument of influencing others, and only through that (owing to internalisation) becomes a key that the subject can apply, on his own initiative and volition, to his brain, to his psyche. So, signs are produced of men as a special kind of tools to regulate their behaviour and to control inner psychical processes.

On the other hand, the concept of cultural sign was connected with theoretical sources of Vygotsky's search. Some facts of the role of external means (for example, knot or a notch "for memory") were perfectly well known. But these facts were indicated as the presence of some artificial mode of "simulation" that passes the memory. Vygotsky

considered these facts as related to the basic pattern of the ontogenesis of all higher mental functions.

The idea of psychological tool was based on an analogy with the tools of labour, being taken from Marxism. "In human behaviour one encounters...many artificial devices for mastering mental processes. By analogy with technical means we may justifiably label these devices "psychological tools" (Vygotsky, 1960, p. 5).

"It is impossible to assume that labour is not tied to a change in the type of human behaviour if we agree with Engels that "the tool implies specific human activity, the transforming reaction of man on nature, production" (Ibid., p. 80 - 81). "Children solve practical tasks with the help of their speech, as well as with their eyes and hands. The unity of perception, speech and action ...constitutes the central subject matter of any analysis of the origin of uniquely human forms of behaviour" (Vygotsky, 1978, p. 26).

The essence of Vygotsky's studying the *consciousness as the structure of the human behaviour,* was the investigation of how this structure appears and changes genetically e.g. in a process of behaviour development. This process was described with the "general genetic law of cultural development". The internalisation was seen as the main mechanism of this socio-cultural development. The idea of a *zone of proximal development* was no more than concrete application of this mechanism to the pedagogical problem of relations between education and development.

Transforming the two-part scheme for the analysis of behaviour into a three-part scheme, he was faced with the problem of the cultural sign, which became the centre of his research. The results of this research were connected with the assertion the role of the sign in the organisation of higher psychical functions and control of his behaviour or, in other words, to the level of personality-based self-regulation different from the self-regulation of the organism's behaviour.

For Vygotsky the sign is the symbol with definite meaning, that has evolved in the history of culture. That is why he himself called his conception "cultural-historical theory of the development of higher psychical processes". Therefore, the problem of meaning /word meaning/ became the centre of his next step.

The consciousness could not be seen as the "structure of human behaviour" any more. The consciousness was seen then as something *that organises this structure,* transforming human behaviour into man's action.

From "the structure of behaviour" to the problem of meaning

Before Vygotsky, meaning was studying by linguistics and philology, mainly in the context of the structure of the language and speech development. On the other hand, several innovative philosophical theories dedicated to the problem of relations between language, speech and consciousness appeared at that time (Husserl, 1970; Sapir, 1921) which were important also for the psychology.

In a process of development of speech and thinking, the question of the origin of signs as mediators in its internalisation, did not require special research. These signs were words. Reorganising behaviour, these signs acquire the status of a verbal reality which, unlike the organism's other bodily actions, create the "apparatus of consciousness"." The special feature of human perception - which arises at very early age - is so called reality perception. This is something for which there is no analogy in animal perception. Essentially it lies in the fact that I do not see the word simply in colour and shape, but also as a world with sense and meaning. I do not merely see something round and black with two hands; I see a clock and I can distinguish one thing from another" (Vygotsky, 1976, p. 546).

Speech meditates and supplants the immediacy of natural perception - the child perceives the world through his speech as well as through sensory perception. With the help of words, the child begins to master his attention, creating new structural centres in the perceived situation.

By allowing the child to shift his attention from the ongoing situation, this shift in the relation between perception and attention makes it possible for the development of a new kind of motivation. Instead of a preoccupation with the outcome of an interaction, the emotional thrust can now be shifted to the nature of solution. The use of sign system such as language dissolves the fusion of the sensory and motor system, *making new structure of human behaviour possible.* "Prior to mastering his own behaviour, the child begins to master his surroundings with the help of speech. This produces new relations with environment in addition to new organisation of behaviour itself" (Vygotsky, 1978, pp. 24 - 25).

In the present-day literature his *The Thinking and Speech* monograph associates mainly with the problems of the development of egocentric and inner speech (in contradiction with J. Piaget), or with the concept of generalisation. But we can say that he came to the research of the development of the speech and thinking, finding this area more suitable to examine his idea of the *meaning* as the primarily unite of the human consciousness.

The task was to investigate *meaning as the psychological category* with the suitable example of psychological analysis of its concrete form - word meaning. The further development of his search was concentrated around two problems, which were: the problem of the word and meaning and the problem of meaning and object reference.

Word and meaning

The subject perceives the word as a sign of some content or meaning. It is on this content, and not on the sensual sign used to introduce this content in the subject's consciousness.

Vygotsky saw this problem as laying in another dimension. Similarity of the external form of words used as instruments of mutual understanding (for example, between

child and adult) does not in itself ensure the identity of their inner form, or meaning. From this point of view he criticised William Stern's study of the stages in the development of child thought.

According to Stern, the child first perceives the world as separate things and persons, later as actions of persons and attributes of things and objects, and finally he grasps the entire system of the complex relations between men and things. The ground of this evaluation was obviously the grammatical categories of which child's speech was constructed: substantive - object, verb - action, adjective - quality, etc.

From the point of view of Vygotsky "semantically, the first word of a child is not a noun but a simple sentence...It is clear from this already that a child who pronounces separate words (no matter nouns, verbs, etc.) uses it as a sentence, usually a very complex one..." (Vygotsky, 1982, V. 2., p. 409 -410).

"Extremely varied mental opinions can be concealed by identical grammatical structures" (Vygotsky, 1982, V. 2, p. 309). It is also true that the same mental opinion, or meaning, can be expressed in various, different grammatical structures. "The structure of speech is not a mere mirror-like reflection of the structure of thought. It cannot therefore be put on thought like a dress. Speech is not an expression of ready-made thought. As thought becomes speech, it is reconstructed and modified. Thought is not expressed in the word, it is performed in it" (Vygotsky, 1982, V. 2, p. 307).

How these modifications and reconstructions appear and what determines this process of transformation of thinking into real verbal one? Trying to find the answer, Vygotsky introduced a distinction between "meaning" and "object-reference".

Meaning and object - reference

Vygotsky's distinction between meaning and object-reference in a frame of the psychology of thinking was similar to E. Husserl's idea of differentiation of the *sense and reference* (Husserl, 1970). The classical example of this distinction, coming from Frege, is that of the two names "the evening star" and "the morning star" that both refer to the planet Venus. The names have the same referent, but different modes of presentation or "senses" are associated with each name.

Vygotsky gave the following example for his *meaning - reference* distinction. "Whether we say "the victor at Jena" or "the loser at Waterloo", we refer to the same person, yet the meaning of the two phrases differs" (Vygotsky, 1962, p. 73).

The conclusion was: "Using this terminology we might to say that the child's and adult's words coincide in their referents but not in their meanings" (Ibid., p. 62). Meanings of words develop in individual's mind. For Vygotsky the distinction between meaning and reference had great significance for understanding the ontogenesis of human consciousness; it "provides the key to the correct analysis of the development of early stages of children's thinking" (Vygotsky, 1956, p. 192).

This distinction allowed him to deal with the function of referring, or picking out particular objects, independently of the function of the categorisation these objects in terms of generalised meanings. The cultural meaning of the word is not the object (for example, *clock* as something round and black with two hands), but categorised reflection of reality. Vygotsky wrote that "the basic distinguishing characteristic of the word is the generalised reflection of reality" (Vygotsky, 1956, p. 383).

This was the basis of his conception of stages of generalisation. The focus of the problem was to prove that categorisation or generalised *word meaning* is inextricably tied to human social interaction. "In order to transmit some experience or content of consciousness to another person, there is no other path than to ascribe the content to a known class, to a known group of phenomena, and as we know this necessarily requires *generalisation.* Thus is turns out that *social interaction necessarily presupposes generalisation and the development of word meaning,* i.e., generalisation becomes possible with the development of social interaction. Thus higher, uniquely human forms of psychological social interaction are possible only because human thinking reflects reality in a generalised way" (Vygotsky, 1956, p. 51). The levels of generalisation in a child correspond strictly to the levels of development in social interaction and any new level in the child's generalisation signifies a new level in the possibility of social interaction.

Vygotsky outlined an ontogenetic progression of generalisation from "unorganised heaps" to "complexes" and then to "concepts". But there was one very important point; I mean the *transition* between "complexes" and "concepts" which can be also be interpreted as *formation.*

This transition is possible because of the existence of so called "pseudoconcepts" or "concept complexes". One of the most important functions of pseudoconcepts is that they make possible a more advanced form of an adult-child interaction. However, even at this new level genuine "agreement" about meaning does not exist between child and adult. "Although the child agrees with the concept in its outward form, he/she in no way agrees with the adult in the mode of thinking or in the type of intellectual operations that he/she brings to the pseudoconcept. It is precisely because of this that the meaning of the pseudoconcept takes on great functional significance *as a special, two-sided, internally contradictory form of childhood thinking"* (Vygotsky, 1956, p. 181).

This "two-sided" nature of adult-child interaction provided the motivating force behind the transition from pseudoconcepts to concepts. Until the child has reached an advanced stage in the mastery of word meanings, adult-child interaction is asymmetrical in an essential way. Whereas children's understanding of words may be based on relatively simple, context-bound sign-object relationships, adults understand them in terms of a complex system that involves sign-sign relationships.

But further progress occurs by mastering fully elaborated meanings embodied in the norms of the adult community. "We have seen that the speech of adults around the child, with its constant, determinant meanings, determines the path of the development of children's generalisations, the circle of formations of complexes. The child does not

select the meaning for a word. It is given to him in the process of verbal social interaction with adults. The child does not construct his own complexes freely. He finds them already constructed *in the process of understanding other's speech.* (Italics mine: - N. V.) He does not freely select various concrete elements and include them in one or another complex. He receives a group of concrete objects in an already prepared form of generalisation provided by a word....In general, a child does not create his own speech, he masters the existing speech of surrounding adults" (Vygotsky, 1956, p. 180-181). It is possible, therefore, to say here of the *formation* rather than the *transformation* of something from an external plane of activity.

So, the development of the meaning, which was shown as the stages of thinking development through generalisation, is essentially not the transformation, but as the social formation, the process of creation of consciousness.

Meaning and speech: the problem of inner dialogue

Piaget described children's egocentric speech as "speech for oneself, speech which is not intended for others", as a manifestation of the child's "egocentricity". According to Piaget, when the child becomes socialised this peculiar speech form disappears. In contrast, Vygotsky saw egocentric speech as a bridge between external interpsychological functioning and internal one. The claim was that the "scheme of development is first social, then egocentric, then inner speech" (Vygotsky, 1962, p. 19). Vygotsky's point was that egocentric speech "... does not simply atrophy but goes underground, i.e. turns into inner speech" (Ibid., p. 18).

The reason for the appearance of this intermediate speech form is that the new self-regulative function of speech is still not completely differentiated from earlier social functions. The failure to appreciate the existence of this new speech function leads the child temporarily to continue using overt, self-regulative speech and to produce such speech in potentially communicative settings. As the child comes to appreciate and master this functional differentiation, egocentric speech gradually disappears, turning into inner speech.

Among the claims that Vygotsky made about egocentric and inner speech is that they reflect their social origins. "Egocentric...emerges from its social foundations by means of the child's transferring social, collaborative forms of behaviour to the sphere of an individual's psychological functions...children begin to converse with themselves exactly as they had earlier conversed with others" (Vygotsky, 1956, p. 87).

As for *inner dialogue,* he occasionally emphasised it in the following statement: "In inner speech humans as it were preserve the "function of social interaction" even in their own individual behaviour; they apply a social means of action to themselves. In this case their individual functioning in essence represents a unique form of internal collaboration with oneself (Vygotsky, 1960 , p. 450 - 451). This statement is important as the turning point from the area of speech development to the sphere of the

development of the personality. "The individual becomes for himself what he is min himself through revealing to others his own in himself. That is the process of formation of personality. This explains why all the inner elements in the higher functions were external: they were, for others, that which they are now for the self" (Vygotsky, 1986, p. 53). The ideas of cultural meanings as the field of consciousness ontogenetical development and the dialogical, quasi-social essence of the inner speech were bridges to the general conception of the consciousness development.

The last programme: integral scheme of consciousness

Vygotsky's analysis of the thinking and speech and the processes of generalisation and social interaction was the clearest and most complete demonstration of the idea of the *meaning as the primary unit of consciousness.* He tried to show that, being social in origins, these meanings emerge in external speech and only later acquire of special form of being in inner speech. As the result of this transformation (which can be also understood as the formation) they have no external expression, accessible to objective observation and analysis, the latter form, according to Vygotsky, the "substance" of the individuality's inner world.

On the other hand, Vygotsky himself recognised the insufficiency of meaning as a unit for the analysis of thinking. In the concluding chapter of his *Thought and Language* he wrote: "The thought is still not the last instantiation in this process...Thought itself is engendered by motivation, i.e. by our desires and needs, our interests and emotions. Behind every thought there is an affective-volitional tendency, which holds the answer to the last "why" in the analysis of thinking. A true and full understanding of another's thought is possible only when we understand its affective-volitional basis" (Vygotsky, 1962, p.150).

Meaning cannot be accepted as a self-sufficient unit since *in meaning there is no "motive force" for its own transformation into consciousness.* Hence, the meaning could not be seen as the unit of "inner world" *Only the cognitive aspect of thinking is fixed in meaning.* It was the turning point of the method of psychological analysis. "The atomistic and functional analysis that has dominated scientific psychology in recent decades has resulted in the examination of individual psychological functions in isolation...The problem of the connections among these functions, the problem of their organisation in the overall structure of consciousness remained outside the field of investigator's attention" (Vygotsky, 1956, p. 43).

Consciousness cannot be seen as an attribute of any particular state or process such as attention (even volitional) or memory (even logical), but rather the attribute of the way in which such states are organised and functionally related both to behaviour and each other. It needs the new type of the analysis, not atomistic or even functional, but the analysis with units.

"The unity of consciousness and the interrelations of all psychological functions, were, it is true, accepted by all; the single functions were assumed to operate inseparably, in an uninterrupted connection with the another. But in the old psychology the unchallengeable premise of unity was combined with a set of tacit assumptions that nullified it for all practical purposes. It was taken for granted that the relations between two given functions never varied: that perception, for example, was always connected in an identical way with the attention, memory with perception, thought with memory. As constants, these relationships could be, and were, factored out and ignored in the study of the separate functions. Because the relationships remained in fact inconsequential, *the development of consciousness was seen as determined by the autonomous development of single functions* (Italics mine - N.V.). Yet all that is known about psychic development indicates that its very essence lies in the change of the interfunctional structure of consciousness" (Vygotsky, 1962, pp. 1 - 2).

His discovering of the process of thinking development in which the word meaning played the central role as the psychological tool was rather effective. But there were weak points in its schema, as the meaning of a word was seen only as intellectual product.

Vygotsky began to realise that "thought itself is not born of another thought but of the motivating sphere of our consciousness which comprises our drives and needs, our interests and urges, our affects and passions" (Vygotsky, 1982, Vol. 2, p. 357). It was necessary to find the new integrative unity that could involve the meaning as the part of its structure. In his studies of motivational determinants of behaviour, which he made at the same period (Vygotsky, 1933), he began to distinguish the concept of sense from the concept of meaning.

The difference between the sense and meaning can be shown with the following example. The "formal" meaning of the word, as a separate item recorded in the lexicon, assumes a great many diverse shades of meanings in concrete contexts. The totality of all the psychological facts arising in our consciousness thanks to the word or a certain text can be called the sense of that word / text - a fluid and complex structure constantly changing "from consciousness to consciousness and, for one and the same consciousness, from one set of circumstances to another" (Vygotsky, 1982, Vol. 2, p. 347).

The principal achievement here was not the division between stable meaning and dynamic, mobile sense, and even not the idea of "dissociation" of the word and the *sense expressed* in (which in comparison with Vygotsky's interpretation of the meaning, was something radically new). The idea of sense was turned by Vygotsky to *the problem of understatement*. With the transition to understatement, however, the verbal thinking, originally seen by Vygotsky as cognitive activity, not only an intellectual but also a motivational act of volition, "setting in motion thought and speech" (Vygotsky, 1982, Vol. 2, p. 357), showed through the "inner plane" of verbal thinking.

Comparing from this point of view *the text* and *understatement*, Vygotsky stressed that each line conceals a volitional task. It cannot be grasped from the meanings of these

words by themselves. It glimmers through the words and can be understood if the motives of the behaviour of the speakers of those lines are known.

Meaning represented in the individual consciousness "the image of the world revealed in the word". Sense denoted also the individual's emotional experiencing of the tense motivational personal, individual attitude to the world. "There exists dynamic system of sense which is a unit of affective and intellectual processes. It shows that any idea contains, in a highly developed form, an affective relationship between humans and the reality represented in that idea. This kind of analysis permits one to reveal the direct movement from a human's needs and motivation to the direction of his/her thinking. It also permits the reverse movement, that is, from the dynamics of thought to the dynamics of behaviour and the concrete activity of the individual" (Vygotsky, 1934, p. 14).

The sense of the text lays not in this text and not in its context but under the text. Therefore, "the field of the consciousness" can open itself and be opened *while examining of the movements of sense.* The word does not only signify the meaning, but expresses the individual's emotional and motivational experiences, embodied in the sense of the word. *It means that adequate analysis of the consciousness is possible as the analysis of the dynamic unity of meaning and sense.* This was the last programme of Vygotsky's research of consciousness. This plan was not destined to be fulfilled - he died on June, 11, 1934 at the age of 37.

Discussion

The analysis of Vygotsky's search makes it clear that all innovative results in the area of higher mental functions development and even basic explanatory principles were strictly connected with the problem of consciousness. The discussion topics, therefore, have to be presented also within this frame.

The problem of external and internal

The distinction between external and internal has long been recognised in psychology, and variety of perspectives and solutions have emerged on it. Vygotsky's idea of internalisation as a process of sign-mediated transmission of external (social) into internal was seen as a bridge between both. The acceptance of the notion that external and internal activities are identical makes the concept of internalisation meaningless and dismisses the problem of mental development. The acceptance of the notion that these forms of activity are absolutely distinct makes the problem irresolvable. Is it impossible thus to present a logically consistent explanation of how the abbreviation and reduction of external activity can lead to the formation of the internal plane of activity if external material activity is *not a mental (internal) formation or does not*

involve the mind (internal) as an essential component. Does it mean that internalisation can exist only when the internal is not completely internal and the external is not completely external? And if it is so, then where is the difference or even the border between external and internal?

The possible answer could be that *there are no two systems* where psychical functions appear but only *one system.* This system is not external or internal, or external and internal, simply because there is no border between both. And, from this point of view, internalisation is no more than recombination of the elements of this system and appearance of new connections between them. This proposition corresponds strictly with the ideas of "systemic approach" in modern psychology. (Järvilehto, 1994).

On the other hand it corresponds with the original Vygotsky's ideas about the interrelation between child and adult in the context of the pointing gesture. This example can be reinterpreted as the situation when *being in one system* with the mother, the child uses her abilities (or even her consciousness) as the instrument of grabbing the object. He uses this to solve the volitional task as if he has his own abilities. The pointing gesture hence is the sign which recombines the elements of the "child - adult" system and this recombination can be seen as certain common movement to the result.

If, as Vygotsky wrote, "all mental processes are quasi-social", the problem of external and internal is related the problem of the location or the modes of existence of these processes, but not as their essential matter. But is the problem of the location so important when the child and adult are not two, but one system?

The sign as psychological tool

The sign was seen as the "psychological tool" - the mediator between external and internal. But what is the nature of the sign? From one side it is something external, from the other - internal as the carrier of meaning. But let us ask: "Is it really so that every tool has the meaning? Perhaps, however, sometimes a tool has assigned to itself *not meaning but purpose*? This means that the process of development of higher psychical functions can go not only from the meaning to the sign but also from the sign to meaning. Here, once again we face the problem that this process cannot be described with the terms of internal and external, because this movement is possible only in radically different field, not as a movement *from intra to inter* and, at the same time, vice versa. Of course, this "adult-child" system is not homogenous. But being involved in this system the sign can be seen as an element of that system with the same status as any other.

This means that the historical role of his ideas was that Vygotsky moved the psychology of the consciousness to the border behind *the very basic postulate that there is something external and internal cannot work anymore.*

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