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Symbol and symbolic consciousness

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The term “symbol” is a widely used notion and at first glance its meaning seems absolutely clear. But in fact its meaning has much in common with such notions as “a sign”, “a metaphor”, “an allegory”, “an emblem”. Very often they are got mixed up. The symbol as we understand it is a specific means of human relation to the world and in this regard it should be distinguished from other conceptions, relative as they are yet different mediators of human relations with the surroundings. Let us take a sign as an example.

The main property of a sign is its ability to represent something different from what it is. Its ability to appeal to the qualities of one object using the quality of another one is its main sense. The meaning of the sign as its functional quality displays itself only in course of sign activity. Its specificity can be regarded as handling some perceived objects instead of the others. The process of attaining sense is common for both a symbol and a sign, and results in confusion of these terms.

The familiarity of the processes of symbolizing and signing are provided by the ability of both to manifest the thing, the generalized meaning of which (its notion) can be extended and used to handle another object as if it were the previous one even if it doesn't look exactly as the original. In combination of one object with the sense of another one the symbol as well as the sign emerges.

Having established the similarity of a sign and a symbol it is necessary to uncover their difference.

As a rule the sign and the signed are different in substance and do not have either formal or essential link. The symbol and the symbolized though different in substance possess the internal (E.Fromm) or natural (F. de Saussure) link. This link is regarded as internal because there doesn't exist any physical resemblance between the symbol and the symbolized.

An ascertainment of this link has got a mediated character and is based on analogy or association principle. In respect of a symbol analogy plays a role of a constructive principle as it implements the symbolic transmission.

If the objects are analogous in form, function or structure, they are essentially relative. Even if they are different on existential point they are similar in their symbolic characteristics and are thus interchangeable. Symbolic potential can be presented as a process of “beading” various objects on “a string” of sense, the process of combining them and making them equal to

one another. In that way symbol is regarded as integrity, a gestalt, a sense unit, containing deep-laid meaning and able to shape the natural phenomena with attained symbolic functions into something absolutely different by dint of a number of analogies and associations following one after another.

One more difference between the mediators in the question is as follows. Any sign possesses a stable meaning and “resists” the plurality of its interpretations. In contrast a symbol accumulates the variety of object's senses and can be presented as centre gradually providing disclosure of the senses. For a sign policemy is an obstacle injurious to its rational functioning in a monosemantic context. And in contrast the more a symbol is ambiguous the more meaningful it is.

The content of a symbol is a substance of a higher level than the one typical for a sign and this is the main difference between two of them. Abstract ideas and notions, universal principles and regularities, values and senses — all those invisible cultural objects that defy our imagination and are hard to define and express — are symbolized consciously.

There exists one more difference between a sign and a symbol and it is connected with an existential substance of the last. Signs in general are rationally cognizable and are the part of thinking whereas symbols usually exceed the area of thinking and can only by understood, i.e. included in an integral experience both individual and collective. Symbols are the definite ways of perception, processing and transmitting of existential facts acquired spiritually which in their turn are essential components of emotionally colored collective or individual experience.

Symbols are always emotionally dependent and are able to arise certain psychological states which ultimately become their identification. Provoking emotions symbols attach a meaning and a value to the content they represent. Symbols always contain values and belong to a certain personality. Values are exteriorized in symbols and in their turn are able to exert emotional impact on people.

The difference between the sign and the symbol makes it possible to differentiate between several types of consciousness and correspondently represent various positions of a person in his/her relations with the surroundings.

A symbol and a sign as two main modes of representing the sense design two types of conscious functioning and as a result two ways of behavior and activity regulations. Each type of consciousness goes through 2 stages of cultural development: the initial one, appealing to the archaic strata of culture, connected with a symbol as a method of sense orientation in the world around, and a later one, connected with attainment of scientific knowledge.

The author hypothesizes that it is necessary to assign in the integral structure of a consciousness a specific type of it where symbolic formations are especially active. These areas of consciousness are responsible for generation of unconscious attitudes, individual senses and motives which manifest themselves in a non-reflexive, a non-sign form, i.e. as symbolic consciousness. Sleep and real life in dreams, reminiscences of the past and child experience, rituals and beliefs, myths and parables, fairy tales, games and art – those are the modes of a symbolic consciousness filling the sense life of a human being.

All the important things in our life accompanied by emotions belong to the symbolic ones. Symbols reflect the sense that our activity provides. Symbolic consciousness faces the depth of our being and operates images and not concepts. Thus symbolic functions of consciousness provide the integrity of a human world perception and define the possibility of

an individual sense of a person become the part of the world they live in.

A symbolic consciousness erodes the border between the archaic and the modern consciousness and becomes a sort of a bridge between two of them. The development of the higher forms of thinking does not expel imaginative-symbolic structures but replaces the point of their location. The dominance of logic-sign thinking in modern culture doesn't have a natural origin. It takes start in childhood with the process of intensification of the activity of brain structures and is connected with the prevalence of right hemisphere's type of information processing.

Emphasizing the symbolic consciousness as a special type, it is necessary to bear in mind that in reality it is closely connected with other types of consciousness. They are not completely isolated from one another. At the same time being the measure of different forms of consciousness, symbols as mechanisms of symbolic consciousness preserve a kind of specificity when functioning within these forms of consciousness.

Contemporary philosophy and methodology of science are to depart with an illusion to control and articulate scientific cognitive means only by rational components of a consciousness. It looks like that clearly defined scientific concepts derive from some prior beliefs for which intuition, symbolism and irrational consciousness are typical and which link the human consciousness with a wholeness of individual being.

Face-Symbols as Psychological Tools

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The first part of the article gives a theoretical analysis of the possibility to regard human face as a study subject in the cultural-historical psychology. The author presumes that face is a complex symbol and the origin of various secondary symbols that have their own history in the world culture. Not only masks, portraits, caricatures, photographs etc can be regarded as symbols, but the real face itself can also be considered such. Regarding face as symbolic mask of soul is typical both of physiognomic tradition that lasted for several centuries and of modern sociopsychological discourses and researches on impression formation and managing, image-making, self-presentation and so on. However, one may come up against some terminological tricks connected with polysemy of the word 'face' (for example, 'at face value' etc).

The fact of polysemy and the danger of mixing up terms require bringing in additional tentative definitions and term explanations. First of all, it is necessary to distinguish three types of face-symbols: 1) real face is a primary symbol; 2) pictures and images of faces are secondary symbols; 3) verbal portraits are tertiary symbols. Along with these external factors (or rather artifacts), one should distinguish internal face-images (percepts, images-notions, imagination images, verbal portraits). At last, it is necessary to bring into consideration several phenomena that are close to the meaning of the word 'face' used by social psychologists, though it is only a part of the problem concerning the sociocultural functions of face. Therefore, we will use a broad term 'face-effects' corresponding to the various psychological outcomes that can be achieved by means of face-symbols. Face-effects refer to the mentioned 'face-images' and also to more or less general evaluations of one's qualities, for example, to his/her physical attractiveness (good-lookingness), mendacity, credibility, intellectuality, age, health, and other personality characteristics. What other effects of human faces can be of practical and theoretical interest?

The fact that schematic faces turned out to be suitable means of integral representation of multidimensional information (Chernoff H., 1973, 1977) is extremely interesting from the point of view of the cultural-historical psychology. Furthermore, we presume that face-symbols can be effectively applied in psychotherapy; and what is most important, it is the psychotherapeutic orientation that opens the promising perspective for new directions in fundamental and applied researches on psychological effects of face-symbols within the framework of the cultural-historical psy-

chology. The use of human faces in advertisements, logos, types, and trademarks is a social practice in which the resources of human faces' powerful psychoenergy are constantly tested and which is of considerable interest to the cultural-historical psychology as the source of problematic facts.

Let's review our thesis on the appropriateness of regarding face as a psychological tool in detail. One can doubt this interpretation at least because of the following three circumstances: first, face is not an extrasomatic thing; second, it is not artificial to the full extent; and third, it is a part of the body that has its own physical (biophysical) functions.

The article gives the arguments that support the thesis on regarding face as a psychological tool. A long time ago Plotinus stated that "the entire body is only the instrument of the soul" (Plotinus). Both logically and empirically this characteristic can be as well applied to face. But in regard to face the word 'tool' (or 'instrument') becomes ambiguous, because apart from the biophysical functions (sensory, protective, absorbing, etc), face is 'overweighted' with functions (e.g. communicative, aesthetical, psychotherapeutic) that, as a matter of fact, are connected with the notion of psychological tool (Vygotsky sometimes used synonyms, such as 'sign', 'stimulus-means', 'auxiliary means').

The fact that the same object or body organ not only has the functions of psychological tool, but is also a material (physical) tool, was, according to Vygotsky, a rule on the early stage of cultural-historical development. He stated that first psychological tools were at the same time material (or physical) tools. This was exactly what he meant when he wrote: "The history of labour and the history of speech can hardly be understood without each other" (vol. 6, p. 84). To illustrate this, he referred to a slightly inappropriate ethnographic example of a stick used in agricultural labour (tools that were used in agriculture cannot be regarded as typical of early stages of anthropogenesis).

The situation is resolved when we think, as F.T. Mikhailov describes it, that "tools and objects of work, and all other objective factors that are created in the working process, — these are the main material means of human communication. In the aggregate they represent 'the language of real life', that is, the certain sign system, every sign (object) of which unites people, controls their behaviour, and guides their activity" (Mikhailov F.T., 1976, p. 212). In addition to this, we can presume that human face (and not a cobble or a stick) was the first psychological tool, and this, of course, does not con-

tradict the idea that physical and psychological functions are combined in face. Interestingly, human face as psychological tool is, unlike objects of work that evolve in the process of cultural-historical development, a genuine cultural universal.

Thus, theoretical analysis given above brings us to the univocal conclusion that it is possible – and necessary – to consider human face to be psychological tool, and, therefore, to be a worthy subject for the cultural-historical psychology. This conclusion represents our support for V.P. Zinchenko's euristic idea that face should be included in the list of seven basic mediators of one's spiritual development (Zinchenko V.P., 1997).

The second part of the article gives a brief review of results obtained in ontogenetic, sociopsychological, and neurophysiological researches that are relevant to the author's hypothesis that eyes (in comparison with nose and mouth) play the most important role in various face-effects and, in particular, in assessing one's physical attractiveness. It seems like Plotinus understood this a long time ago: "Even here, on Earth, eyes are often more eloquent than words..." (Plotinus, 1995, p. 81).

It is known that most people, while communicating with others, pay attention to their partners' faces, mostly on their eyes that act as the primary centre of face perception, and it is probably connected with the fact that in face scanning there is a clear top-down tendency in one's eye movements (Haig, 1986).

The habit of looking at partner's face and noticing changes of expression on his/her face develops gradually, starting from the first weeks after birth. As it was shown in Robert Fantz's studies, newborn babies show to take great interest in the patterns in the human face. Recent studies discovered that just several minutes after they are born, children prefer to look at pictures showing faces (e.g. Slater, Johnson, 1998). And what is most amazing, children aged 2-3 months prefer to look at attractive (from adults' point of view) faces than at unattractive, judging by the length of their look (Langlois et al., 1987).

Many researchers point to a whole range of characteristics that increase the attractiveness of face. Among these are: symmetry, averageness, childlike (neonatal) facial features (babyfacedness), smile, size of pupil, hair on head and face, hairstyle, etc.)

According to ethologist R. Ahrens (1954), newborn baby's smile is an innate reaction generated by perception of a structure consisting of two eyes that serves as releaser stimulus. This biological base of social reaction was indirectly proved by neurophysiologic researches that revealed the presence of neurons reacting to human faces in the inferotemporal cortex of monkeys (e.g. Yamane et al., 1988). Analysis of the correlation between face characteristics and neuron responses showed that neurons detect the combinations of distances between parts of face, that is, between eyes and eyebrows, and between eyes and mouth.

At last, one more evidence in favour of our hypothesis comes from researches that consider pupil size a factor of face attractiveness (Hess, 1972; Tomlinson и др., 1978; Cunningham, 1986).

These facts are of a certain support to us in putting forward a hypothesis that different parts of face play different roles in assessing one's attractiveness, and, in particular, that eyes play the most important role in this process. This problem was as well the subject of our research (Meshcheryakov, Yushchenkova, *Cultural-Historical Psychology*, № 1 2006) in which we used a method of assessing the attractiveness of faces that were shown full-face and in parts, which allowed us to use multiple linear regression to test the hypothesis.

As we mentioned before, attractiveness assessment is only one of the many face-effects. Therefore, it is necessary to examine the psychological role of eyes more carefully. As a final point, let us outline several questions that are related to our hypothesis. Why is eyes area the first to be hidden if one wants to disguise his/her identity? Which part of face best allows one to recognize familiar faces? Which part of face writers and poets describe most often and in more detail? On average, which part of face draws most attention during the first meeting and which part of face consumes most of one's time and resources in preparation for meeting with other people? And finally, which part of face is most often associated with emotional content (for example, happy, sad, cunning, angry ... eyes)? The eyes-hypothesis that we put forward gives a simple and, in some cases, evident answer to all these questions. Anyhow it can serve as a stimulus for further interdisciplinary investigations.

On methods for investigating concepts

L.S. Sakharov

In consideration of the importance and key role of the method of artificial concept formation in the development of double stimulation methods and the experimental foundations of Vygotsky's study on the development of word meaning, the Journal publishes L.S.Sakharov's report in full (according to: *Psychologiya*, 1930. V.3, ed.1, pp.3–33). The article provides a detailed history of the origination of Vygotsky-Sakharov's method and analyses the previous methods of concept investigation.

The analysis starts with the description of the "method of definition" where the researcher lists the attributes of a concept and asks the child to name the concept; or the researcher lists several concepts and then asks the child to find a family concept for them. This method enables the study of the concepts which are already formed, however the process of the concept formation remains unclear. "Direct methods" for investigating concepts are free from this drawback as they look at the processes that underline concept formation. One such method is the method of studying processes of abstraction. However, even here abstraction processes are studied in an experimental situation which is remote from a natural setting in which these very processes lead to concept formation. In concept formation, the abstraction is directed and guided by word. The abstraction outputs become closely linked to the word and the concept emerges in the form of a word-meaning. At the same time such an important factor of concept formation as the functional role of a word is not taken into consideration.

The method of study of the processes of abstraction doesn't take into account that the concept is formed only when the child's mental operations are object oriented and word guided, that is when the child uses the word as a means of directing the processes of abstraction. "The word without its sensory material and the sensory material without the word", — this is a short formulae that illustrates the contrast between the method of definition and the method of studying abstraction.

To explore the role of a word in concept formation the author (under L.Vygotsky's supervision) elaborated a new method. It was based in classical experimental psychology and the work by N. Ach. A theoretical basis of Ach's work was as follows:

1. The study of concept formation cannot be limited by the study of the concepts which are already formed; the process of formation of new concepts is important.

2. The method of experimental study should be genetic-synthetic in nature; during the course of the experiment, the subject must gradually arrive at the construction of a new concept — hence the need to create experimental concepts with an artificial grouping of attributes that belong to them.

3. It is necessary to study the process by which words acquire their meaning, the process of transforma-

tion of a word into a symbol and a representation of an object or of a group of similar objects — hence the necessity of using artificial experimental words that are initially nonsense to the subject, but acquire meaning for him during the course of the experiment.

4. Concepts cannot be regarded as closed, self-sufficient structures, and they cannot be abstracted from the function they serve in the sequence of mental processes. The objective conditions only, that is a set of objects possessing common properties, is not sufficient for concept formation. Concept formation also has subjective preconditions and requires the presence of a certain need, which it is the function of the concept to satisfy. In thought and action, the development of a concept plays the role of an instrument for achieving certain ends. This functional aspect must be taken into account in an investigatory procedure; a concept must be studied in its functional context. The subject must be confronted with tasks that can be accomplished only if the subject develops certain concepts. The development of those concepts will require the use of a series of nonsense verbal signs to solve the problem, and as a result those signs will acquire a specific meaning for the subject.

The experimental material was a collection of geometric figures made of cardboard, 48 in all: 12 red, 12 blue, 12 yellow and 12 green. The 12 figures of each color were separated by size, weight and shape. Six figures of each color were large, and six were small. The six large items were divided by shape into two cubes, two pyramids and two cylinders, the pairs being outwardly identical. One cube, pyramid and cylinder were filled, and were heavy, whereas its partner was light. The same division was made for the six small units of each color: two cubes, two pyramids and two cylinders, one of each shape being heavy and the other light. The units of each color thus consisted of three large heavy and three large light items and three small heavy and three small light items.

The subject receives assignments he cannot complete without the help of some initially meaningless signs ... These tasks can be correctly performed only on the basis of attentive prior observation of the words and of attributes (written on the labels) of objects assigned to these words ... The signs (words) are means by which the subject can achieve a specific end, namely, to solve the problems posed by the researcher; and because they are given such use, they acquire an unequivocal meaning.

Ach's method was later put to a much broader use by Rimat and Bacher with, however, certain modifications.

Aveling used double stimulation as a technical means for phenomenological description of the inner experience of the meaning of fully formed concepts.

For psychologists of the school of Determinations-psychologie, i.e. Ach, Bacher and Rimat, double stimulation plays the role of an environment outside of which it

is impossible to study the process of concept formation. But it must be said that the problem of double stimulation, the problem of forms of behavior and thought with regard to which external stimuli fall into two series, each with a different functional significance, is a problem N. Ach had not yet posed.

This points up a number of distinctive characteristics of Ach's method. The experiments begin with a mechanical association of individual objects with individual signs. The subject does not know why he is doing this, he does not have a 'task'. The grouping of the figures, by virtue of its symmetry, diverts his attention from the conditional connections forming between the objects and the verbal signs, leading to the formation of new connections, namely, connections among the objects themselves. As a result, the mechanism of association (even when the first exercise period is deliberately prolonged to several dozen repetitions) becomes impotent: a concept is not formed. Though having received a task, the subject is unable to resolve it. However, now a decisive turning point occurs: a task and a goal conception have appeared; all processes are gradually re-ordered, the mechanism of association acquires a new use and, after one or several attempts, the task of selecting a group of figures is resolved on the basis of a concept formed with the aid of words. That is the substance of Ach's method.

So what is the difference from the Ach's method of the one presented by the author? In contrast to Ach we are interested not in the determining role of the task, but in the special functional significance of the verbal signs that, in the particular case, organize the subject's reactions that are directed toward objective stimuli, the material. We term verbal stimuli that play this role 'instrumental' stimuli, to refer to their use in the subject's behavior.

On a game board divided up into fields, about 20–30 wooden figures resembling draughtsmen are placed in one field. These figures are differentiated as follows: (1) by color (yellow, red, green, black, white), (2) by shape (triangle, pyramid, rectangle, parallelepiped, cylinder), (3) by height (short and tall), (4) by planar dimensions (small and large). A test word is written on the bottom of each figure. There are four different test words: 'bat' written on all the figures small and short, regardless of their color and shape; 'dek', small and tall; 'rots', large and short; 'mup', large and tall. The figures are arranged in random order. The number of figures of each color, shape and of each of the other attributes varies. The researcher turns over one figure — a red, small, short parallelepiped — and asks the child to read the word 'bat' written on its exposed underside. Then the figure is placed in a special field on the board. The researcher tells the child that he has before him toys that belong to children from some foreign country. Some toys are called 'bat' in the language of this people, for example, the upturned figure; others have a different name. There are other toys on the board that are also called 'bat'. If the child guesses after thinking carefully where there are other toys called 'bat' and picks them up and places them on a special field of the board, he receives the prize lying on this field. The prize may be a

sweet, a pencil, etc. The time and the order in which the child removes the figures are recorded.

The most varied types of responses are observed: test reactions without any reasons, choice on the basis of a set (e.g. forming a collection), choices on the basis of maximum similarity, on the basis of similarity with regard to one attribute, etc.

The basic features of the procedure we developed amount to the following. There is a collection of figures of different shapes, colors, height and planar dimensions. Unlike Ach's set of figures, this collection is a motley, unorganized whole: it is irregular and asymmetric. Different attributes occur an unequal number of times. The collection is based on four experimental concepts associated with test words, which are written on the bottoms of the figures, not visible to the child. Each concept contains two attributes, e.g. height and planar dimensions. One concept embraces all tall and large figures; the other, all tall and small; the third, all short and small; and the fourth, all short and large. The experiment is done as a game. The figures are arranged on a game board at random, without any pattern. These are toys of a foreign nation. One of them is turned upside down, and its name in the language of this people is read aloud. According to the rules of the game, the child must remove all the toys that have the same name as the up-ended model and place them in a special field on the board without turning them over and looking at the inscription. The entire game consists of the child's attempts to place correctly all the figures with the same inscription as the model. After each such attempt, the researcher turns over the new figure, revealing the child's mistake, which is either that among the removed figures there is one figure with a different name from that which is on the model, or that among the figures not removed there is one with the same name as the model and hence belongs to the field. Since after each placement of the figures the child discovers the name of a new figure (which the researcher has up-ended), every new attempt of the child to solve the problem is done on the basis of a larger number of model.

Thus, the principle of the experiment is that the series of objects is given to the child immediately as a whole but the series of words is given gradually, and the nature of the double stimulation continually varies. After each such change we obtain the child's free response, which enables us to assess the changes that have taken place in the child's psychological operations as a consequence of the fact that the series of objects now contains a new element from the verbal series.

In conclusion the author reports that with an aid of a new method a word passes through three stages that are present in outline in the ontogeny of children's concepts: 1) Initially, it is an individual sign with its own name; 2) then it becomes a family sign with its own name associated with a series of concrete objects (complex concept); 3) finally, it becomes a general abstraction.

Thus, we have an experimentally organized picture of the ontogeny of concepts and are able to carry out analytical studies of the functional role of words in all stages of this ontogeny.

L. Vygotsky—L. Sakharov's experiment: Cultural-historic retrospective

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For Vygotsky the subject through the study of which his ideas of psychic development as the transformation of sign meanings could be realized was the speech development which highest form was the concept development. In the framework of solving the problem of mediated character of higher psychic functions and also taking into consideration the development of the sign function in thinking L.Vygotsky equated notion with the word meaning. However it is necessary to mention that L.Vygotsky in his studies focused rather on thinking than on speech. The word was regarded by him as a sign while its meaning — as a developing structure of an object matter. The communicative context was actually reduced to a modeling of a feedback in experiments.

Vygotsky well understood that sign relations never appear as ready ones but in each case they are to be constructed by means of affiliation of the sign with the action expected, which displays itself as the “meaning area” of activity. The question of the regularity of such kind of affiliation (providing the existence of primitive forms of sign operations in preschoolers and young schoolchildren) appeared the main one in L.Vygotsky-L.Sakharov's study of concept formation.

In studies by Piaget one of the primitive forms of this kind is presented as syncretism, in which objects are grouped together on the basis of irrelevant factors and do not necessarily have any features in common. Yet it is obvious that for the purpose of experimental study it is necessary to possess the criteria with the aid of which we can interpret the grounds for generalization as “subjective”, as linking “everything with everything”. It is natural that the question about the criteria of this kind springs up. Besides the experimental strategy used by Vygotsky and aimed at the disclosure of the mechanism of child mental operations presupposed the analysis of object referred content of child generalization, i.e. the type of analysis usually either ignored by J. Piaget or substituted by the operation referred analysis.

It was important for Vygotsky to show that sign operations display a certain path of development and to emphasize their functional aspect, i.e. the specificity of using signs in the course of the signifying function's development. Still the study of signifying functions in the process of their development was plotted by L. Vygotsky and L.Sakharov as the study of the developing inner structure of meanings. In Vygotsky's view it was equal to the structure of the object reference of the sign, i.e., it was the structure he equated with word-meanings.

Thus the task was to settle the forms that the concept attains in the process of its development and to reveal the structure of the object reference of the pre-concept (protoconcept) word-meaning (as typical for young children). It is obvious that the study of this structure made it necessary to examine the bases for the grouping of objects where each way of grouping would correspond to a certain sign form. In experiments by L. Vygotsky and L.Sakharov it was the change in the structures of such groups that served the indicator of the meaning development and the structures themselves were the ground for definition of these developmental stages as different types of syncretes and complexes.

L. Vygotsky has singled out three main stages in concept development: the stage of syncretism ; the stage of the formation of complexes; the stage of potential concept-formation. In accordance with Vygotskian texts syncretes coincide with a disarranged form of grouping in which the bases for ordering are the qualities subjectively attributed by a child to objects or impressions. Complexes differ from syncretes due to their affiliation and objective character. In contrast to true concepts they are based on concrete, objective features and not on logical links between them. The stage of complex formation was subdivided by L.Vygotsky into five sub-stages which were regarded as the stages of concept formation: associative complexes, collections, chain complexes, diffuse complexes and pseudoconcepts.

The features of affiliation and objective character as typical for complexes need some comments. Affiliation seems to be treated as the structured character of grouping which in Vygotskian view underlies the process of word-meanings development and first displays itself in complex thinking. As far as the objective character of complexes is concerned as the point of their difference from syncretes the reference to their concreteness is not operational enough. The relations underlying syncretes (and Vygotsky pointed to this fact himself) are also very concrete, i.e. existing in reality, for example, spatio-temporal relations between the objects. At the same time they are occasional and do not exactly belong to the objects. Evidently the differences between syncretes and complexes regarded from the point of view of their concreteness should be interpreted as differing in the type of the object mediated relations underlying the type of grouping. At the same time it is clear that object mediated are the relations between the stable features of the object, even if they are singled out with the help of concrete and not logical operations. So the main principle

for grouping objects in complexes is the object itself, and in syncretis they are extra-object relations. If the group of objects is not structured and is based on extra-object relations, it is equal to the syncretic principle of generalization.

According to Vygotsky complex thinking is typical for children of certain age, for adult representatives of some traditionalistic cultures, for people with schizophrenia and even for normal people. The main characteristics of the complex thinking is the coincidence in object reference of complexes and concepts with the convergence of meanings. Obviously it can happen only in case of convergence in a structure of groups with a similar set of objects. In a present day terminology this difference can be represented in terms of denotative and connotative sign meanings. So the study of the connotative aspect of word- meanings which is determined by a group structure underlies the typology of syncretis and complexes.

We singled out three structural characteristics with the help of which L.Vygotsky describes each type of complexes and specifies the difference between them.

1. General configuration of the structure — is set by the object reference of the pattern

2. Character of intersubject links — is determined according to the associative link (identity, familiarity, contrast, contiguity) that scaffolds the structure.

3. Relations between the generalized features of the objects and their concrete meanings — the parameter defining the set of elements in the complex structure, its content.

In Vygotskian view the complex thinking is supposed to include three possible configurations of the structure: nuclear — with one object as a pattern; chainlike (concatenate)- where the function of the pattern permanently goes from one object to another one; amorphous — in which the pattern is never set aside for a certain object, i.e., all the objects in a group are simultaneously the patterns (see figure 1). At that the associative complex has a nuclear structure, diffuse and chain com-

plexes have a chainlike structure and collections have an amorphous structure.

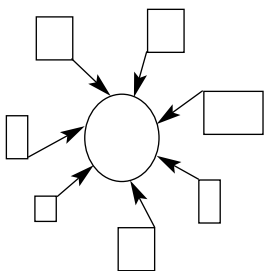
In all the types of complex thinking except collections all the types of associative thinking are used while in collections complex associations by contrast are the main ones.

Now the last characteristic of the structure — generalized features of the objects and their concrete meanings. In the associative complex both generalized parameters and their concrete meanings are changed. In collection complex the same elements are changed but the generalized feature should remain stable for some time as a ground for collection. In chain complex only generalized features are changed and in the diffuse one — only concrete meanings of the parameters.

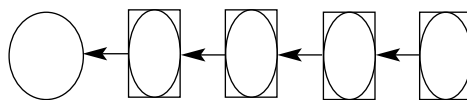
We see that the last characteristic of the structure (the one connected with the features of objects) is the most significant one for the supporting description of structural links which makes it possible to differentiate the types of complex thinking in practice. The general configuration of a complex structure is of importance for distinguishing the regularities of object grouping as far as it indicates the object features (affiliation of signs) contained in the pattern. Here we may note that complex thinking is based on object relations and the pattern is the bearer of these relations.

The type of links between the objects has only a meaning of a global characteristics of the complex thinking and as far as it is equally important for all types of complexes it cannot be used as the ground for their differentiation. Only the generalized features of the objects and their meanings are differently incorporated into the structure of different complexes. More so we can detect here the definite dynamics of the development in structural relations of this or that complex and regard this development as aimed at extraction of the meaningful and correspondently concept thinking. This dynamics and this sense look that clear just because we regarded the structure of the complexes from the point of view of general features and meanings of theirs.

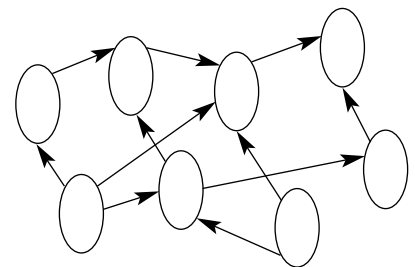
Types of word-meaning structures in complex thinking according to L. Vygotsky



"Nuclear" structure of the complex (in the centre of the structure there is a circle symbolizing the object-pattern)



"Chainlike" structure of the complex (the circle symbolizes the object-pattern; each grouped object becomes the pattern during the next choice)



"Amorphous" structure of the complex (all the objects are simultaneously the patterns)

I.A. Sokolyansky and His Methods of Teaching Visually and Audio-Impaired Children

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It is well known that in 1924 Lev Vygotsky, when asked about the area of the highest usefulness of his ideas, named the development of blind, deaf and mute children. He knew about the success in teaching blind and deaf children in USA, he often referred to the famous Helen Keller in his works. He was well-acquainted with I.A. Sokolyansky's experience in teaching blind and deaf.

Sokolyansky and Vygotsky were contemporaries and colleagues, but not team-mates. At about the same period they experienced enthusiasm for the theory of conditioned reflexes as the base of human mental development. But later Vygotsky moved away from reflexology towards cultural-historical understanding of psychology, while Sokolyansky remained a reflexologist all his life, even though he denied it many times.

Sokolyansky received education on defectology in the Psychoneurological Institute in Saint Petersburg in 1908–1913. At that time the Psychoneurological Institute under the guidance of the prominent psychiatrist V.M. Bekhterev combined the most advanced researchers in physiology, linguistics and pedagogy. A method of strictly objective observation of a child's behaviour, mimics, and speech in accordance with external stimuli, a child's moods and hereditary predisposition was being founded at the Psychoneurological Institute, a method new for that time. Along with studying at the Institute, Sokolyansky completed a course for teachers of deaf and dumb children and got highly interested in developing methods of teaching the deaf and started teaching at the Alexandrovsky Educational Institution for the Deaf and Dumb in the South of Russia. He taught there until 1919 with a three-year interval, when he was drafted to take part in the First World War. Methods of work with the deaf, especially methods of teaching them how to speak, were a source of much distress to him. At that time the prevailing Russian method was oral teaching, and Sokolyansky realized that no great effort of his led to any significant success in his students.

After the Soviet regime was established in the Ukraine, Sokolyansky became one of the most active promoters of education for people there. His first results of the research in teaching the deaf and the deaf and dumb were published during his work in Kharkov in 20-30s. He was the author of the so called chain method of teaching lip-reading, a fully reflexological method. For deaf students of the first or second year a chain of well-known school actions was chosen compiled in such a way that at its end children could find themselves at its

beginning. There was a particular command given by the teacher for each action in the chain. After the students were seated the teacher showed them with a sign that they were to look at her lips, then pronounced the first command in the chain ("Stand up, students!") and showed them what they had to do. Then she pronounced the second command, also combining it with the gesture ("Come up to me, students!"), and so on ("Stand up one by one in turns!" or "Stand up in pairs!" etc.) until the students were seated at their desks again. Then more complicated combinations of actions were required, each repeated several times, and after a break the chains were repeated but this time without gestures. The results were noted down, and the average time and number of repetitions required to learn lip-reading were set up.

The next stage was to teach deaf students to read written instructions from the wall posters. The teacher showed with the baton the instructions for the students to follow, first combining it with the gesture, and then without this support. Comparison of the results revealed that written instructions were learned by the students faster than the oral ones for lip-reading. One chain of commands for lip-reading was taken in by children in 12 minutes on average, while the same chain was learned from the poster in 6–7 minutes.

Good results achieved in teaching the deaf by Sokolyansky impressed Vygotsky so much that in 1925 he included Sokolyansky's method in his individual plan of testing 'the most interesting contemporary synthetic systems of teaching communication' to the deaf.

At the same time I.A. Sokolyansky was experimenting with this method in the new institution which he established in 1923 for the blind, deaf and dumb children on the basis of the Kharkov School for the blind. Over a few years of his work there with a small group of like-minded colleagues Sokolyansky managed to develop a thorough method of teaching completely blind, deaf and numb children to take care of themselves and to carry out simple everyday tasks.

Methods of work with children at the first stage in teaching, according to Sokolyansky, are "direct-goal" methods. Depending on the individual development of a child, interaction and mutual positioning of an adult and a child are established. A teacher stood behind a child, with the child's palms on the back of the teacher's palms. In this position the adult acted using some objects, while the child accompanied the adult's actions with the movements of his/her own hands, first passively, and then more and more actively. Gradually the adult moved his/her hands above the child's hands,

with the adult's hands controlling the child's movements less and less, and the child's hands becoming more and more active. Finally, the adult's hands moved away from the child's hands but the adult went on standing and moving close by in order to help, catch and direct the child's actions.

All actions in routine behaviour of a blind, deaf and dumb child connected with satisfying his/her physiological needs (eating, sleeping, keeping warm, a need for movements) were organized as a system consisting of "basic skills" interacting as a chain of purposeful links, in which the main elements of routine behaviour are included. The final element in a chain leads to the beginning of a new chain of actions. Mastering the main elements of routine behaviour, a child starts getting orientation in his/her living space, learns how to deal with the objects around. In this process the first means of communication – gestures – were formed.

This method was found highly successful in teaching the basic skills to blind, deaf and dumb children suffering from pedagogical neglect. However, trying to reach independent, purposeful and conscious routine behaviour in these students, Sokolyansky came across extreme inflexibility of behaviour in some students. This discovery led him to the understanding that no skills should be formed as ideal. It was necessary to practice overcoming and finding the way out on the way to reaching the goal. To win over the passive attitude of some students, competitive games were introduced.

Not all blind, deaf and dumb students in Sokolyansky's school required such dramatic efforts. Some came to study in the school fully ready to be taught how to take care of themselves, with active desire to improve their behaviour, with immense interest in everything around them. For such students, Sokolyansky set forward other priorities: they were expected to "see" as often as they could others around them in the process of carrying out everyday routines.

Sokolyansky taught them to observe carefully the actions of people around, helped them form first the notion that everybody is involved in some activity at any time, and at the next stage the goal to learn to read and write. Such a child was then carefully encouraged to observe those children and adults who read using Braille books, and also they were helped to touch those books, to "look" through them. After that the children got help in mastering the alphabet of the blind and reading and writing with it.

That was the most active period in Sokolyansky's life, and it lasted up until his arrest in 1933. Although he was released from prison after only three months, he was a parolee for three years, and his life changed tragically. In 1937 he was again taken to prison, where he stayed until he was released in 1939. By that moment the building of his school had been confiscated, almost all his students had been moved to the asylum, where they did not get any proper attention and were thus gradually degrading. After his release from prison Sokolyansky was very unwell for half a year and did not leave home. When he got better, he immediately left for Moscow to work in the Research Institute for Specialized Schooling.

Sokolyansky was exculpated and rehabilitated only in 1957. A few years before his death he wrote, "I have never suffered from personal loneliness, but for a long time I have suffered from professional isolation. Naturally I do not blame anyone. Even the so called "circumstances" are not to blame. When I started teaching the blind, deaf and dumb and managed to organize a very decent clinic, I was confident it would attract much attention of the "big" pedagogical science, with which I wanted to get in touch, even tried to impose myself there. Nothing came out of it."

However, he attracted the attention of the "big" psychology, and the influence of Sokolyansky's pedagogy can be traced in many researches.

The problem of personality in cultural-historical psychology

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The Vygotskian cultural-historical concept is usually not regarded as a personality concept. Yet, this is not quite correct. Even though Vygotsky didn't write a special monograph on this topic his whole scientific inheritance can be regarded as a psychology of personality.

Vygotsky formulates the essence of a new investigation strategy that can be treated as a scientific psychology of personality. He establishes a link between a notion of personality and a category of development, he emphasizes that development should be understood from the point of view of a history of the child's cultural development. He states that it is only the cultural-historical approach that possesses this method of scientific investigation of a human being as a personality. According to Vygotsky the old psychology is unfit for scientific study of a personality as it belongs to a classical type of psychology. The method of old psychology doesn't allow the investigation of the developmental processes which are closely connected with a notion of personality.

Humanistic psychology deals with the study of a man as a personality. Yet the theories of this type are not exactly scientific. They belong to phenomenological, descriptive or understanding psychology that utilizes an ideographic method of study. This approach doesn't distinguish between a phenomenon and its essence.

Even nowadays psychology of personality is still moving "from the phenomenological study of psychological phenomena to the discovery of their very nature". This fact has its own explanation. The study of development as a way of existence of personality according to Vygotsky requires researchers to "overpass the methodological limitations of traditional child psychology". But the level of his requirements to methodological principles was so high that not all of his followers could follow them. Thus, it is understandable, that a number of scholars belonging to Vygotsky's school of thought later returned to the principles of traditional psychology. It is clear thought that Vygotsky's work was a break-through to a psychological science of a new type.

The last monograph by Vygotsky was devoted to the problem of emotions and was directly connected with the study of B. Spinoza. Obviously, the idea of "causa sui" was familiar to him and he understood its meaning

very well. He repeatedly emphasized that development is always a process of self-development.

Not all the psychologists understand that to observe the thesis "development is self-development" means to overstep the limits of former thinking and to change the formal logic into a logic of self-development. V.Davydov was a psychologist who clearly understood the significance of the idea of self development. He stated that not all the things possess the status of development and not all things are capable of this highest form of development.

D. El'konin was one of the pupils of Vygotsky who mastered his teacher's method in full. He warned against the preposition "and" to be used between the notions "a child" and "a society" because, due to its function in the sentence, this preposition can connect as well as disconnect the notions. It can result in understanding of a child as isolated from the society and a society as isolated from the child. This approach directly leads to the reductionisms of a naturalistic way of thinking and such a pseudo dichotomy as 'biological and social' in human psyche and such a limited notion as "socialization". According to D. El'konin, the correct expression is "a child in the society" not "a child and the society".

The principle of wholeness of a child's personality is presented by Vygotsky as integrity of his/her affect and intellect. D. El'konin makes an attempt to realize this principle by introducing the idea of dialectical interrelation of a child's orientation toward "the world of people" and "the world of objects" with predominant significance of either object or social orientation at different stages of ontogenesis. The world of people and the world of objects taken together exhaust the fullness and wholeness of child's consciousness and personality. Yet the mechanisms and driving forces of transition from one dominant activity to another remain vague. What exactly does make a child change the focus of his/her attention from the physical domain of the surrounding world to the world of social relationship, and vice-versa?

In the Vygotskian theory of "stage development" basic meaning is attached to the main psychological accomplishments of each stage and the social situation of development rather than the leading activity. These two notions are internally linked. The emergence of a

new psychological quality (new developmental accomplishments) lead to changes in the social situation of development, and the further realization of this social situation's potential results in the appearance of further accomplishments. These concepts are highly important for understanding the logic of self-development.

The integrity of affect and intellect is difficult to describe if the third component of psyche, – a sphere of volition is not taken into account. Vygotsky distinguishes two characteristics of an act of volition: its complex and initially mediated character and the experience of freedom that follows the volitional act. From this point of view speech as a central psychological accomplishment of infancy is a function of volition. Furthermore, it is our assumption (Vygotsky didn't articulate it in an explicit way, but it seems to be embedded implicitly in the context and content of socio-cultural approach) that all the developmental accomplishments of each of the stages of development belong to the volitional sphere of psyche. In infancy such a developmental accomplishment is speech; during the preschool age it is imagination; in junior school age it is voluntary attention; in adolescence it is self-reflection. The view of imagination as a central developmental accomplishment of preschool age is supported by a study of E. Kravtsova (1996) and the volitional nature of attention as a new psychological accomplishment of junior preschool age was discussed by E. Gorlova (2002).

According to Vygotsky there are two main types of psyche: a higher order and a natural psyche. However, the higher mental functions are not homogeneous as well and are, in turn, subdivided into two types: those which were initially higher (and never were natural) and those which were transformed in the process of development from their basic, natural form into socially and culturally mediated psychological functions. Volition is an initially higher mental function that represents itself in speech, imagination, voluntary attention and self-reflection, that is in all the psychological accomplishments of each developmental stage. That is why we can suppose that the general direction of

development in ontogenesis occurs in the sphere of volition. The integrity of affect and intellect as inseparable parts of personality is impossible without volition which is also necessary for understanding the mechanisms of transformation of the elementary psyche into its higher levels.

Vygotsky proposed the idea of consciousness being structured in a systematic and meaning-based way. The specifics of developmental characteristics of an age is in the special structure of consciousness which is characterized by a specific combination of natural psychological functions and a function that takes central place in the development at that stage and is under direct influence of its developmental accomplishments. At the same time the other functions which have already been in the central position before, can now move back to a peripheral area but with a new quality attained, that is, they transform into higher, cultural mental functions, and therefore, become mediated, self-regulated and voluntary. Volition as a central developmental accomplishment transforms the basic, natural mental functions into their higher, voluntary form. Thus the development of personality can be explained as a mastery of one's own psychological functions, as an expansion of the psychological realm of one's own conscious control.

The Vygotskian idea of meaning-based structure of consciousness helps to analyze the "inside" picture of consciousness, which, according to Vygotsky, is characterized by the level and the quality of generalization. Consciousness as a human relation to the surroundings is a relation mediated by certain meanings that are generalized. The generalization is closely connected to social interactions and communication.

The system of scientific concepts, discussed in this article, and initially introduced to psychology by L. Vygotsky, enables a new vision of the developmental process as a self-movement and self-determination which is consistent with the logic of "causa sui". Cultural-historical psychology is the only theory which allows for the establishment of this new paradigm in approaching a psychological study of personality.

Zones of Development, Zones of Counteraction, and the Area of Responsibility

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Most psychological and pedagogical theories proceed from the following idea: it is generally assumed that all people responsible for education (parents, teachers and others) have one common positive goal – to raise the effectiveness of education, to stimulate mental development in children. But there are some important issues that were not discussed at all. Are organisers and participants of the educational process always right-minded? Are their goals always positive? Is there a certain type of teaching which slows down development, opposes it? Can education be harmful on purpose, can someone teach ‘bad things’ to children? The article analyses the possible answers to these questions.

We presume that civilizations, societies, social groups, and individuals develop under the influence of two contradictory and interrelated social forces: a) promotion, assistance, stimulation; b) repression, counteraction in gaining experience, learning, and developing. The diversity of goals, strategies, and means of promoting and acting against one’s learning and development in many ways determines the multidimensionality of developmental process.

In this context we discuss different notions introduced by L.S. Vygotsky, C. Benson, J. Valsiner, H. Daniels, A.G. Asmolov and others, that reveal the ambiguity and multidimensionality of developmental outcomes in different social interactions, drawing special attention to the problem of deliberate disorientation in teaching and to the ways of acting against it.

The article reviews two main aspects of disorientation. The first aspect is disorientation in moral and social norms, that is, when one’s disorientation is due to egoistic individual or group interests. This is what people call ‘teaching bad things’. The second, cognitive aspect is the development of a disorientating basis of activity in concrete subjects, and since passing on and acquiring valuable knowledge and skills is highly important (as it affects the results of rivalry), there are various conflicts arising in this area. The article shows the interconnections (that are sometimes ambiguous) between these aspects, discusses the ethical problems and analyses the cognitive aspects of these problems.

Learning ability, morals, and the problem of ‘top’ and ‘bottom’ students

Totalitarian and inhuman regimes often use children and adolescents as soldiers and most cruel executioners

because of their learning ability (flexibility) which enables them to ‘succeed’ under the amoral, but effective guidance of ‘more competent’ adults (C. Benson). Other examples include teaching children to steal, cheat and so on, but still, all these cases refer to the amoral educational guidance. However, the effectiveness of such group guidance is different for each of its members., and it is necessary to understand why people become top and bottom students. Why some of the group members succeed in learning, while others do not? Why are these ‘educative and nurturing influences’ extremely effective for some people, while others counteract it, passively or actively, and develop in the opposite direction?

The problem of the connection between learning ability and moral responsibility can be solved through the conceptual notions of *moral agency* and of *space of responsibility* (the latter introduced by C. Benson). The space of responsibility is determined by our perceptions of what we should do and what we should never do – ‘I cannot think otherwise as long as I am what I am’. Furthermore, *some abilities never develop just because a person does not let them develop due to his/her moral reasons* – s/he considers it impossible for him/herself to enter certain zones of development even though s/he knows s/he would have succeeded in them if s/he wanted to.

The article analyses the cases when teachers or students abandoned education due to their moral reasons.

Cognitive aspect: disorientation in concrete subjects

In modern society that is built upon knowledge, “the ability to learn faster than your competitors may be only sustainable competitive advantage” [Arie de Geus]. But understanding the key role of knowledge may lead one’s competitors not only to raise their own learning ability and educatedness, but also to attempt to reduce other people’s learning ability. Because blocking one’s ability to learn and to acquire new skills is one of the most effective ways of leaving a competitor unable to survive in the changing world. Counteracting one’s learning becomes the ‘dark side’ of teaching along with the ‘Trojan’ education – teaching disadvantageous, dangerous, harmful things to competitors. The article gives several true-life examples (common for different social, professional and age groups) of the ‘Trojan’ education and of one’s deliberate counteraction to other people’s learning

In order to find out whether this counteraction and the ‘Trojan’ education is widely prevalent, we conducted an anonymous inquiry using the questionnaire we had developed. There were 455 Americans and Russians participating in the inquiry. More than 80% of the respondents in all subgroups think that teaching ‘with evil intent’ really exists and takes place in schools and universities. About half of the participants think that there were several incidents in their life when someone interfered with their education from unfriendly motives, or when someone taught them ‘with evil intent’. From 9 to 20% of the respondents in different subgroups (including several professional teachers) taught ‘with evil intent’ themselves.

In general, the results obtained in our inquiry show that along with assistance and cooperation, unfair competition and the use of education in harmful to someone are quite common in educational practices. The amount of people that gave positive answers to many of our questions indicates that we should not ignore this problem and must consider it psychologically and pedagogically significant.

Disorientation strategies in education: an experiment with ‘devil’s advocate’

In this experiment adult participants were introduced to the problem of competitive activity and were then asked to assist in revealing unfair tricks. The participants were supposed to identify themselves with a person who counteracts other person’s learning and to explicate their ideas and future actions (in other words, the participants were offered a role of ‘devil’s advocate’). Experimentalists taught every participant to use a mathematical formula to predict abstract mathematical variable according to data sets. After being instructed, the participants were asked to imagine that they have to teach this formula to their future competitors, with whom they will have to compete in predictions’ accuracy. The experiment showed that, while playing the role of ‘devil’s advocate’, the participants successfully demonstrated their ability to teach ‘upside-down’, that is, to make their competitor’s learning as hard and ineffective as possible, to teach without teaching. The level of this disorienting activity depended on the participant’s competence in the subject (in our case, in mathematics) and on the extent to which the participants identified themselves with the role of teacher-competitor.

In another experiment, children aged 5–6 years were offered to choose the content of education for negative and positive characters from a popular cartoon, ‘The Lion King’: for hyenas that hunted small birds, and for the lion that saved these birds. Preschoolers were supposed to decide whether to teach the characters right or wrong bird language; whether to teach them how to climb trees, and so on. In absolute majority children ‘helped’ the positive character to learn something useful and prevent them from learning wrong, bad or useless things. And, on the contrary, children prevented negative characters from learning things that would help them to gain their ‘bad’ aims, and ‘helped’ them to learn wrong and harmful things. This experiment shows that even preschoolers can understand the situations in which one should help or interfere with someone else’s learning, and these decisions depend on one’s moral principles.

Neutralizing ‘Trojan’ education

In order to study the possibility of neutralizing the ‘Trojan’ education, we conducted one more experiment with adult participants. The experiment showed that there are the following ways of resisting one’s counteraction: subjects of educational activity should behave in an active, independent, explorative manner; they must take into account the aims of other participants of educational process; they must critically and consciously assess the educational materials offered to them.

Afterword

As the civilization develops and new areas and types of activity emerge, not only aims and ways of teaching them to people, but also aims and ways of counteracting this teaching develop. The future of mankind relies on achievements not only in education that stimulates cognitive and personality development, but also in counteraction to education.

But psychology is not a neutral observer of human development; it is actively involved in its processes. It not only reveals the universal logic, but creates and constructs the reality along with other agents of civilization development [C. Benson]. And this agent must be, first, moral, and second, competent, so that he could resist aggression, evil, and, eventually, manslaughter. This, indeed, is the area of cultural psychology’s responsibility [A. Poddiakov].

Cultural approach in psychotherapy

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In given article the variant of cultural – historical psychology advanced by L.S. Vygotsky and his students – A.R. Luria, A.N. Leont'ev, A.V. Zaporozhets, D.B. El'konin etc. is considered. According to this concept, human mental processes are carried out with the help of the certain psychological tools. They are produced by a society and acquired by the individual due to interiorization, the “appropriation” of the social relations and their transformation into individual mental function. Applying these interiorized tools, the person obtains the ability any way to manage voluntary his/her behavior and mental processes, organizing them according to his/her own intentions.

These positions are most properly elaborated with reference to development of cognitive processes. However they are relevant to every form of human development – in particular, to the development of the personality taking place during psychotherapy. The general logic of cultural – historical psychology quite often leads researchers to a psychotherapeutic problematics even when initial research problems were connected only with educational problems. So, psychotherapeutic aspects clearly act in G.A. Tsukerman's researches on different age cooperation and in M. Cole's project “The Fifth dimension”.

So, as the concept of general psychology, the cultural – historical psychology should give substantiation to psychotherapeutic practice and it can cope with this problem because of having the necessary theoretical toolkit and research methods. The analysis of psychotherapeutic techniques from positions of the cultural – historical approach should answer the following questions:

- What psychological tools are offered to the client by the given system of psychotherapy, what ways of their use it forms for him?
- How the social relations between the client and the therapist are constructed, how effectively the interiorization of tools and their “appropriation” by the client is achieved?
- To what extent the voluntariness and independence of the client in managing of his/her mental conditions and activity is provided?

Let's consider an initial direction of psychotherapy, which in many respects became a paradigm for all the subsequent, the classical psychoanalysis. In process of psychoanalysis the reconstruction of person's previous

life experience took place. As a result the complete system of representations in which client's symptoms obtain a logical explanation is created, acting as a reproduction of last (basically, children's) psychological traumas. However it not the original biography, but an original individual myth which is the basic psychological tool offered to the client. As any myth, it explains an origin and organization of the world (in this case – of a private world of the client). The question on its relations to a reality is wrongful: mythological events are real not in literal, but in symbolical sense. As any myth, psychoanalytic quasihistory of client's life is unwrapped not in linear, but in cyclic time. As Osiris dies each autumn and revives each spring, the living Oedipus complex – the love to mother, jealousy of the father, fear of castration – is reproduced at the person in his/her mutual relation with other people embodying father and mother figures.

The system of relations of the client with the analyst is under construction according to the model of the child-parent relationship. The analyst being in a role of the wise parent interprets statements and reactions of the client. The process of interiorization proceeds in the “natural” way, occupying many years, as well as development of the child. From here and long dependence of the client on the psychoanalyst (a low level of voluntariness and independence), that causes criticism of psychoanalysis by the representatives of other directions of psychotherapy.

Interpretation of psychoanalytic techniques from position of cultural – historical approach (or, if easier, cultural) does not apply for replacing the “internal” interpretation given by psychoanalysis. It only focuses attention on other aspects of therapeutic process, allowing to understand better both strong, and the weak sides of psychoanalysis.

In article the cultural approach to construction of original variant of psychotherapeutic techniques is described. Main principles of this approach are formulated as followings.

1. Psychoterapist offers to the client the certain psychological tools to overcome (to cope with) his/her problem. Advantage is given to common cultural tools (instead of those specially invented for the purposes of psychotherapy).

2. The process of interiorization “appropriation” by the client of psychological tools is organized purposive-

ly. The psychological mechanism of their acting is opened to the client. It provides voluntariness of their subsequent application, prevents the occurrence of dependence on the therapist.

3. Choosing psychological tools the therapist pays special attention to features of culture to which the client belongs.

4. Psychotherapeutic relations are under construction not according to model of child-parent relationship, as it is psychoanalysis. It is not “friendship for money” as sometimes is called ironically the system of relations in psychotherapy oriented on personality. In frameworks of cultural approach the psychologist acts in function of the teacher owning a direction of use of psychological tools which the client — student should master.

The universal remedies for emotional experiences’ processing are submitted in art. Therefore for the cultural approach the methods of art-therapy are most organic and natural. However for purpose of illustration simpler psychotechnique is chosen — the talisman. It was used and continues to be used by people of dangerous occupations: soldiers, pilots — testers, stuntmen etc. Its psychological function consists in creation of feeling of security, confidence — in other words in reduction of a level of anxiety (alarm). It allows using talisman in psychotherapy working with anxious clients.

Work begins with discussion of psychological function of talisman. If the client trusts in its magic power there are no bases to undermine this belief. The psychologist simply explains, that this question is outside of his competence. As a result of discussion the client comes to a conclusion that talisman helps the person to cope with excitement, anxiety (household synonyms of the term “alarm”).

Further it is found out, what things were traditionally used as talismans. It could be symbols of a religious cult (the cross, sacred image), but it could be and a medallion with a ringlet of the beloved. Thus, psychological function of talisman is emphasized. The fact that it reminds about something very significant to person and is dear for him is decisive. These memoirs also serve as the basic calming factor. Additional positive associations are determined by memoirs about the person who has presented the talisman — mother, the wife or beloved. But original psychological force talisman collects gradually as at its presence dangerous situations become safely resolved. Already it reminds of all these successfully resolved situations. Discussion of all these themes with the client is, as a matter of fact, the organization of his orientation in ways of talisman use.

The following step is a discussion of probable troubles. The client himself thinks out those problems, which can arise, and the psychologist helps him to rec-

ollect the ways fixed in culture to cope with them. The most obvious problem is the loss of talisman. In culture it is fixed two possible values of this event: talisman is not necessary any more, the person already can act without it, or (if without it the person still feels uncomfortably) talisman has spent its force and should be replaced by new one.

More serious problem: despite of presence of talisman, a serious trouble occurs. If such things happened several times then talisman loses the psychological force: because now negative associations are connected to it. The culture has provided the ritual actions directed on “updating” of talisman, on revival of positive associations and inhibition of negative (for example, repeated consecration of a cross). The client should explain, that he will feel, whether such rituals “have worked” or talisman has lost its force for him finally and demands replacement.

The psychologist shows to the client, that the offered technique is based on original “games with him/herself”, but it does not belittle its gravity. Similar “games with him/herself” is a basis of every psychotechnique. Disclosing of the psychological mechanism of self-management with the help of external tools is the important step in a direction of interiorization of these tools, its “appropriation” by the client.

Some clients feel danger in the probable arising of talisman-dependence. But it is the way of human culture functioning: each new achievement results in occurrence of new dependence. For example, let us imagine that accidentally the electricity is switched off.

And one more fears which are extremely useful. It is possible to forget talisman at home. It even needs to be periodically forgotten, because it is the following step to interiorization, lowering dependence on talisman. It is important to learn to recollect it, not having it with you then all those calming associations which are connected to it automatically emerge in memory.

The techniques of work with talisman described in article as well as other techniques constructed on a basis of the cultural approach, was applied by the author with colleagues not in research, but in the practical purposes (at work with the hostages seized at the Moscow theatre and at school of Beslan etc.). It is marked, that the author had no opportunity to organize control group and to provide the diagnostic procedures necessary to confirm the advantages of this or another method. Therefore article is limited to an illustration of the offered approach, without discussion of a question on its advantages and lacks. It was important for the author as the convinced supporter of a cultural — historical paradigm, to show an opportunity of its use in the field of psychotherapy.

The use of sign-symbolic means by preschoolers with intellectual deficiency: Psychocorrection aspect

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Over the past decade interest in the problem of sign-symbolic development of children with special needs has significantly increased. It is connected to the need of developing a holistic approach to the study of specific characteristics of disontogenesis in order to create an integrative technique of psychocorrection. Under the supposition that the divergence of cultural and natural ways of development takes place in disontogenesis (L. Vygotsky) psychologists are looking for the ways to harmonise child development. The key point here is to explore the means by which children with special needs can appropriate the systems of cultural signs and symbols.

An early form of a sign-symbolic function in ontogenesis is substitution. It lays the basis on which operations such as coding, schematization, modeling and experimentation can be formed. N.Salmina has identified the main characteristics of semiotic underdevelopment in junior schoolchildren with low academic achievements. They include inability to use formal language and scientific symbols; difficulties in transformation of certain content from one signal system into another and distinguishing between a real and a symbolic functioning. They also include inability to restore reality on the basis of provided signs and vice versa, inability to express the same notion through a number of different symbolic means.

Underdevelopment of sign-symbolic functions affects the child's personality. An internal conflict between low academic achievement and strong unsatisfied need to be acknowledged (especially by peers) leads to psychological tension, fear of failure, lack of self-confidence and anxiety. In addition, it affects the child's communicative behavior and interpersonal relationship as well as encourages the display of unmotivated aggression and maladaptive forms of behavior.

The problem of semiotic development is especially relevant to children with special educational needs such as mental retardation and developmental delays which are due to the poor development of higher mental functions. Such children manifest some difficulties in the use of sign-symbolic means at early stages of their development and display delays and qualitatively different ways of language system formation, functions of speech, social modeling in play, ability in informative drawing and so on. Later in life it affects their academic achievements and might cause dysgraphia, acalculia, dyslexia and so on.

Semiotic development in preschool age can be viewed as a process of the development of a syncretic

sign as it emerges in play with objects, gradually branches into a number of specialized forms of signs which all attain relative independence at the end of preschool age. First of all syncretism of child development manifests itself in play. The syncretic basis of play is provided by the integrity of the three types of symbolic means: sensori-motor, imagery and verbal (with the dominance of sensori-motor symbols). The phenomenon of syncretism is observed in other types of child's activity but the sign dominance can change. Substitution in pretend play is a psychological tool through which the process of transformation occurs. There are three levels of substitution in play: substitution for objects, role-taking (social substitution) and acting in an imaginary situation (contextual substitution). With the appearance of all the above levels of substitution (especially the first two) play shifts to the status of a leading activity.

A comparative analysis of dramatic role-play in children with different levels of intellectual development revealed that children with mental deficiency experienced difficulties with substitution at all the three levels, including play with objects. However, the children with developmental delays reach the level of object substitution either at usual times or slightly later. Yet, as far as role taking (social substitution) is concerned, this level of substitution is not accessible for children with mental deficiency without special training.

Play of preschoolers with mental deficiency displays a lack of social skill (substance), poor verbal support of the game, deficit of communicative speech utterances and limited repertoire of intonation, mimic and gesture as its sign-symbolic means which indicates that the primary syncretism of these children's play remains underdeveloped.

The same situation can be observed in drawing as a "relative" branch of play. In the normal course of development it is typical for children to bring prior experience obtained in other kinds of activity such as play and communication into the process of drawing. When the child is not able to express something graphically s/he compensates for the deficit of drawing capacity by using familiar sign-symbolic means such as verbalisation, expressive gesture etc., which indicates that drawing at preschool age is based on syncretic sign.

The analysis of drawing in children with a retarded type of development revealed that their mastery of the image-graphic type of sign-symbolic means of in preschool age is problematic even for children with developmental delays. The communication of the meaning in

drawing by play or verbal sign-symbolic means appears to be impossible for them. Thus even in the case of moderate mental retardation drawing doesn't possess a syncretic structure and a sign integrity. It is also necessary to mention that these children are unable to distinguish between the real object and its graphic image, which can be noticed both in perception of real objects and in perception of pictures.

Dysphasia in children with intellectual deficiency is also connected to difficulties in communicating the meaning of certain content by the means of verbal signs. All the speech functions, communicative, cognitive and regulatory, appear to be affected. Sense programming, language structuring of the utterance, processes of speech production are hampered. All the components of the language system appear to be defeated including vocabulary, grammar, syntax, morphology and so on. Verbal thinking also displays an extremely low level of development.

The latest studies indicate that in the case of mental disorders which are followed by absence of symbolic play, the primary syncretism and the specification of signs is not formed and preschoolers (with normal and low intellect) display significant age scattering in their ability to specify signs. This point is very important for predicting a child's readiness for formal schooling and for decisions on decreasing the age for early school entry. It is the author's view that the reduction of the syncretic period in sign-symbolic development, when the process of sign specification is not yet completed, is a frequent cause of low academic achievements and school maladaptation. The reduc-

tion of the preschool period of life leads, in fact, to a loss of a developmental period which is crucial for cultural development of a child.

Thus in disontogenesis of a retarded type underdevelopment can be observed in all kinds of cultural practices of a sign-symbolic nature: play, speech and drawing. In the case of even moderate retardation in development the acquisition of various forms of signs becomes impossible without special psychocorrection interference. If provided in time it allows children with intellectual deficiency to acquire the ability to draw and later to write, to use verbal and nonverbal means of communication and to master socially acceptable behaviors.

At present a new correction-educational paradigm is elaborated which allows psychologists and early childhood educators to construct comprehensive correction programs and techniques. A new developmental correction model is created which enables the formation of sign-symbolic activity in children by involving them in socio-dramatic role play, constructive activity, drawing, and verbal communication.

The use of graphic tasks in sessions aimed at speech development and construction and based in communicative activity; the introduction of elements of socio-dramatic play, imitation; attention to social contents of play and the social ways of interrelations between the characters; combination of play, speech and drawing within one session – all of these means, taken together, provide a corrective developmental effect in the normalization of children's cultural development during preschool age.

Eyes as Predictors of Perceptible Physical Attractiveness of Women's Faces

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Human faces are the most significant stimuli in the environment. In modern social psychology the significance of face attractiveness assessment in interpersonal communication is proved: physical attractiveness has a significant impact on primary impressions of one's personality, on relationships between teacher and pupil, judge and the accused, on interpersonal contacts in many other professional activities, as well as on everyday life (Cialdini R., 1999; Bull R., Rumsey N., 1988; Patzer G.L., 1985). This is why studying factors and changeability of physical attractiveness is highly important, both theoretically and practically.

The main goal of the current research was to obtain new facts about the roles that different parts of female face play in the general assessment of women's physical attractiveness, and also to explore the connection between the latter and such important events in the life of woman, as pregnancy and birth of child. As we analysed literature on the problem, we put forward the following hypotheses: 1) different parts of face play different roles in assessing one's attractiveness, and eyes play the most important role in this process (this eyes-hypothesis was substantiated in another article, see Meshcheryakov B.G., *Cultural-Historical Psychology*, № 1 2006); 2) assessed attractiveness of women's faces can undergo some changes over short periods of time, which is caused by pregnancy and childbirth (it is impossible to find more concrete statements in literature).

In order to test these hypotheses, we conducted an experimental study. The sample consisted of 10 men and 10 women aged from 20 to 30 years. Colour photographs of young women were shown on a display using a computer programme specially developed for the experiment. These photographs were taken full-face or represented several parts of the same faces (eyes, nose, and mouth). Each participant took part in one experiment that consisted of two series: in the first one, three different types of photographs were displayed (their parts and the whole picture); in the second one, photographs of ten women (not long before pregnancy, during pregnancy and after childbirth, randomly) were displayed. Participants were asked to assess the attractiveness of the faces or of the parts of the faces using

a scale with five verbal gradations ('extremely unattractive', 'moderately unattractive', 'indifferent', 'moderately attractive', 'extremely attractive').

The eyes-hypothesis was tested using the multilinear regression. The results obtained in our experiment show that eyes are the most significant part of face as for men, as for women, affecting their assessments of attractiveness (at least of women's faces). We found out that assessments of face attractiveness can be best predicted on the basis of linear regression equation with one predictor variable ('eyes').

Assessments of women's faces attractiveness before pregnancy, during pregnancy and after childbirth revealed the following facts: only one out of ten women after childbirth was assessed as attractive, and women and men in our sample chose different women in this case. The other nine women were equally assessed as attractive before and during their pregnancy. These conclusions were confirmed by two-factor analysis of variance (conducted individually for each of the assessed women). One of the factors (intersubjective) was the sex of the participants, the other (intrasubjective) was the period in the life of the assessed woman: before, during and after pregnancy ('time' factor). In 7 out of 10 cases 'time' and 'sex' factors were statistically significant, and their interaction in most cases (80%) insignificant. Therefore, in general, female and male participants' assessments of women's face attractiveness in different periods of women's life are similar, but there are significant differences in the level of assessed attractiveness (men are more critical towards female attractiveness).

The main conclusion is that such events as pregnancy and childbirth have a significant impact on women's face attractiveness. However, analysis of variance cannot tell us in which period of life woman is assessed as more attractive in comparison with other periods. In order to obtain this information, we needed to conduct analysis of pairwise comparison of average assessments of women's face attractiveness before pregnancy ('Before'), during pregnancy ('During'), and after pregnancy ('After'). This comparison was carried out with t-test for aggregated data (i.e. average values for all faces were examined simultaneously).

Compared pairs	Participants					
	Men		Women		Whole sample	
	t (df=99)	p	t (df=99)	p	t (df=199)	p
'Before' – 'During'	-0,20	0,84	-0,557	0,58	-0,56	0,57
'Before' – 'After'	1,88	0,06	3,166	0,00	3,66	0,00
'During' – 'After'	1,84	0,07	4,253	0,00	4,37	0,00

According to the data in this table, there are significant differences in the pairs 'Before'-'After' and 'During'-'After' in the female sample and in the whole sample ($p < 0,01$). In the male sample such differences, properly speaking, did not reach the level of significance, but are quite close to it ($p = 0,06$ и $0,07$). The differences in the pair 'Before'-'During' are insignificant in all three cases. Therefore, testing the significance of the differences between the average values proves the fact that level of female face attractiveness before and during pregnancy is

approximately equal and that it goes down (provisionally, we suppose) after pregnancy (after childbirth).

Thus, we can draw the following conclusions from the results obtained in the experiment: 1) different parts of face play different roles in assessing one's attractiveness, and eyes play the most important role in the process of assessing one's attractiveness (the eyes-hypothesis was confirmed); 2) the physical attractiveness of women's faces can undergo some changes over short periods of time, which is caused by pregnancy and childbirth.

Communicative conditions for activation of speech activity in schoolchildren of special (correctional) school of VIII type

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In article presents the results of research, which is based on the idea that in speech development of mentally retarded children are the significant potential opportunities, which are not realized in traditional practice of speech work. Let us recollect L.S.Vygotsky's words that the mentally retarded child, as well as any child, develops, and he necessarily has safe sides and qualities. The research problem consists in revealing, "What in development of the mentally retarded child (L.S.Vygotsky) works not against us, but on us, i.e. what are processes, arising in the development of the mentally retarded child which conduct to overcoming backwardness, to struggle against it and to raising of the child on the maximum step ". In other words, the work is devoted to studying of an opportunity to use the communicative approach as resource of actualization of potential speech opportunities of mentally retarded schoolchildren. This approach actively develops now in a special technique of development of speech and training to language.

Legitimacy of a choice of an object of research is caused by the following circumstances.

1. The communicative approach to formation of speech activity which builds on base psycholinguistic works of N.I. Zhinkin, A.A. Leont'ev, I.A. Zimnyaya etc., more fully than the traditional technique of speech development takes into account psychological laws of an origin, structure and functioning of speech activity.

2. Speech opportunities of mentally retarded pupils are not fully realized at a lesson, and the speech skills generated at lessons have poor influence on speech engendering of children in the daily communications. One of principal causes of such state of affairs the specificity of educational speech situations, which is not taking into account psychological laws of speech activity formation.

3. At mentally retarded children the safest area of speech motivation connected with the decision of speech problems of communicative and practical character, therefore the communicative approach allows to rely upon the safe sides of child's motivational sphere. As the motivation level in many respects determines the development, efficiency, purposefulness and other characteristics of speech activity, it is possible to expect, that exactly in situations of personally significant speech activity the child feels shortage of available speech stereotypes, and we can find out the structures of language mastering needed for the child, i.e. he really already requires them, real-

ly trying to embody in speech the contents that have personal meaning to him.

With the purpose to reveal the conditions for activation of speech activity at younger mentally retarded schoolchildren the experimental research of children statements features in different situations of speech engendering was carried out. It was supposed that creation of the conditions strengthening a communicative orientation of speech engendering promotes increasing of speech motive's effectualness in schoolchildren that will display in changes of their communicative behavior and also in increasing of a semantic richness and semantic complexity of their statements. The basic method of research was the individual experiment. Procedure of inspection consists in presentation to each child of four tasks demanding construction of messengers of coherent statements in varying communicative conditions.

In experiment took part 196 schoolchildren (10–12 years old) i.e. they where of the end of the third and of the beginning of the fourth form of special (correctional) schools of VIII type of Irkutsk. For the analysis of statements the following techniques were used.

1. A technique of the analysis of text's semantic structure as hierarchies of predicates (T.M. Dridze's adapted technique).

2. A technique for estimation of statement's communicative development ("unwrapping") i.e. sufficiency of the produced text for its understanding by listener and for creating favorable impression about it.

3. The structured supervision for an estimation of features of child's communicative behavior.

Studying influence of educational communicative situation's character on speech engendering of younger mentally retarded schoolchildren we find out that the effectualness of motive speech engendering depends on communicative conditions in which the statement is created. The influence of a communicative situation is so considerable, that it can determine communicative value of the statement of the same child in a range from the statement practically unacceptable for the communicative purposes, up to semantically and communicatively valuable (high-grade). It is proved by the following changes in speech production of children, passed through the selected communicative situations (from constructing of the statement in a situation of performance of the educational requirement traditional for a lesson to a situation of performance of speech exercise in communicatively enriched conditions).

We observed essential – twice and more – increasing of predicates' quantity (i.e. of semantic units) in the text. This fact appears to be sufficient for children to transit qualitatively from statements unvaluable in the communicative sense, mainly consisting of one microtheme (i.e. equal to one avariciously outlined situational statement) to which children are ready in a traditional tutoring speech situation in the most cases, to polysituational, representing the event complex in the subject plan.

Appears or considerably increased a number of predicates, carrying out the illustrative function that testifies that the child has necessity to not be limited by ascertaining of the basic event but to describe it further, explaining for the listener the feature, the reason etc in details. The given quality of the text has the big value because it is connected with a high probability of orientation towards the listener and the speaker's personal interest to the statement without which the high-grade communications cannot be held. Producing of such predicates (T.M.Dridze names them as predicates of 3rd and-4th order) indicates that children perform complex speech actions.

Changes in the semantic part of the statements observable in experimental situations, have confirmed a hypothesis that mentally retarded children have significant potential opportunities, actualizing by including of motivational mechanisms and connected with supplying the speech engendering with communicative significance. Traditional educational situations cannot "actualize" these opportunities.

In experimental situations of traditional drawing up of the coherent story on adult's request mentally retarded pupils fully showed the peculiarities of so called "school speech", (that was noted in works of N.I. Zhinkin, V.J. Ljaudis and I.P. Negure). These authors connected it with features of the educational communications and its motivational characteristics. At

intensification of communicative orientation of speech engendering subjects passed to more safe variants of communicative behavior, showing interest to the communication itself and producing the statement, sufficient by richness to be understood by listener. Schoolchildren demonstrated the communicative orientation of their speech engendering and orientation to the listener was demonstrated.

Changes in speech production of the mentally retarded schoolchildren are connected with increasing of a communicative orientation of speech engendering. They displayed themselves through child's efforts to make the statement more full, clear, illustrated (growing of quantity and parameters of semantic filling of predicates). It is necessary to note, that simultaneously the statement became externally a little bit more chaotic. The children produced more language constructions not always correct from the point of view of language norms or characteristic for informal conversation. It is possible to assume, that the loss of "smoothness" of the statement in a combination with increasing of its "vivacity" and of the communicative orientation means that the child attempts to embody in speech the complex contents for which he has to use yet undergenerated language constructions. The given fact is extremely important for training because refusing stereotyped semantic and formal – language structures, the child "opens" a zone of this nearest development to the teacher. It is marked, that the given conclusion has hypothetical character and requires the further research, and, such research, probably, should be based on a joint efforts of special psychology, psycholinguistics pragmalinguistics and neuropsychology with use of the appropriate methods of these sciences because the traditional methods failed to differentiate the displays caused by defectiveness of speech-thought mechanisms, and the displays connected with change of communicative intention and with functionally-stylistic phenomena.

Personal semantic attitude of the future specialists to people with impaired development

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The problem of the attitude to the person with impaired development is one of actual problems in special pedagogy and psychology. According to L.S. Vygotsky's opinion, any corporal lack – whether it is the blindness, deafness or congenital dementia – not only changes the person's attitudes to the world, but first of all affects the attitudes with people. Even in the family there is exclusive, unusual, not the same attitude to the child with impaired development in comparison with other children. Change of the attitude to the child due to presence of biological defect and the resulting "feeling of little value", L.S. Vygotsky has called the "social realization of defect".

The basic directions of researches in this area are connected to studying the attitude of a society and the state to people with impaired development, the attitude to the child with impaired development in family, attitudes of peers, teachers, parents of usual children at mass school to the child with special educational needs who attends their class. At the same time the attitude of the future specialist to the person with impaired development at the same time is investigated insufficiently. The importance of the chosen theme is caused by the following moments.

1. Comprehension, enrichment of attitudes of the student – as the future expert – to people who have physical and mental deviations, readiness for study, reorganization of these attitudes promotes personal growth, self-knowledge, strengthens the development of his/her individuality and maturity.

2. The profession of the expert who works with people with impaired development is one of the "person – person" type. In trades of this type (such as a profession of the doctor, the psychologist, the teacher) the problem of comprehension by the expert of the own attitude to the person is important, in many respects determining a choice of the purposes, methods, means, criteria of success, and satisfaction of professional work.

3. Had been going him/herself through comprehension of the own attitude to people with the limited opportunities of health, the future expert can organize the work with teachers of mass school, parents, peers, to form among them the adequate, positive, accepting attitude to members of a society with impaired development more effectively.

We have undertaken an experimental research of perception's character, estimation and categorization by students of the person with impaired, their attitude to existence of distinctions between people, to physical and mental features of person. We have assumed, that character of the attitude depends from cognitive com-

plexity of the personal constructs' system, causing the construction of multidimensional, varying image of this person and increase of alternative schemes of his perception and estimation.

The following techniques were used. The technique of the free description modified by us, that allowed to reveal the attributes which are inherent, by students' opinion, to the person having mental and physical peculiarities. A technique " the Unfinished sentences " with the purpose to reveal features of the emotional and behavioral response of students to an image of the person with impaired development. The test of personal constructs of G. Kelly is directed on revealing of categorical structures of individual consciousness, cognitive complexity, flexibility of personal constructs' system, causing character of perception, estimation and categorization students of themselves and other people.

The following characteristics of image of this person, most brightly reflecting the attitude to him were analyzed.

1. Closeness, community and unity of the person with impaired physical and mental development with other people. The idea about necessity to see in the abnormal child not only his/her peculiarities, but also features which pull him/her together with other children, is incorporated in L.S. Vygotsky's works. He emphasized, that the abnormal child is the child first of all and in the second line, the especial child and that the broadest orientation to normal children should serve as an initial point of special pedagogics.

2. Positivity of an image. One of parameters of the students' attitude to the person with impaired development is their overcoming typical for ordinary consciousness stereotyped, one-dimensional sight on this person only as carrier of illness impaired development, defects, lacks and a recognizing of presence at him safe fund, zones of success, and competence. L.S. Vygotsky emphasized, that the negative characteristic does not exhaust a positive originality of this child, it is necessary to develop those huge deposits and deep layers of mental health which are in the child, necessary to be guided less by lacks and illness, but more by on norm and on the health that was kept at him.

3. The characteristic of the personality of the person with impaired development.

155 students of faculty of special pedagogy and psychology of Irkutsk state pedagogical university took part in experiment. The following characteristics of the attitude of students to people with impaired development were revealed. The emphasis of difference of the person with psychophysiological infringements from

other people, reference of this person to a category “not such, as all“. Orientation at perception of person with impaired development on attributes such as “illnesses, defects, lack“. The fact that this person has not only lacks and anomalies but also the safe fund, potential opportunities on which it is necessary to base in the work of the expert, has noted insignificant amount of students. Prevalence of negative personal features in the image of the person with impaired development. Students mark a high degree of dependence of this person practically in all spheres of life activity, the opportunity to realize his/her special needs only with the constant help of other people. The quantity of definitions in which the students would assert, that under certain conditions (creation of equal opportunities, barrier-free environments, provision of availability of the information etc.) this person can be independent showing activity, and not just passively accepting the help from associates is insignificant.

At the analysis of emotional colouring peculiarities an image of the person with impaired development it was revealed that the majority of students from the first to the last year experience to this person such feelings, as pity, compassion and sympathy. Students of all years can compare themselves to these people. However, opposite to younger students, students of the fifth year specify, that dialogue with these people has forced them to think about philosophical problems (about meaning and values of life, about a place of the person in the world) to reconsider their habitual sight on the world.

On the basis of the specific features revealed in the study we have allocated types of the students' attitude to people with impaired development.

The negativistic type of the attitude is built on the enumeration of defects, lacks, and anomalies, of things that this person can't do, not able and does not know. The image of the unfriendly, spiteful, aggressive, socially dangerous person, which can bring harm, is easy to reconstruct. Division of people on “we and they“, on – good (as carriers of natural norm) and another's – bad (as something abnormal) is actual. It is emphasized, that he never can be as all the others. The image is painted by negative emotions: unacceptance, neglect, fear. The basic behavioral reaction is a desire to avoid dialogue and to isolate this person.

The compassionate type of the attitude. The deviation is perceived as depressing circumstance for the person, and for his/her family, and for a society. The image of the person as passive, inactive, helpless, unadapted,

but at the same time mild, easygoing, open, susceptible, trustful, sympathetic is reconstructed. He/she is perceived as unfortunate, suffering, offended by all, deserted. He/she causes such feelings, as pity, sympathy, compassion, desire to assist and protect.

The students showing constructive type of the attitude, mark presence at this person of potential opportunities, zones of success, competence, positive personal features. The community closeness of this person both with all mankind and with the student him/herself is emphasized. Distinctions between people are perceived as features, which has each person. In descriptions individuality of each person, his/her unique private world is accentuated. The image of the person as active, strong, worthy not pity, but respect, capable to conduct the independent way of life, having all opportunities to take a significant place the life of society is drawn.

Among the students of all years the compassionate type of the attitude is prevailing. The quantity of the definitions referred to negativistic type, decreases to the fifth year almost on half. However there are no changes of quantity of the students showing constructive type of the attitude from the first to last year.

The research has confirmed the assumption that character of the attitude to people with impaired development depends on cognitive complexity, flexibility of personal constructs' system, underlying students' perception and estimation. Construction of a multivariate image of the person with impaired development presence of alternative circuits of his/her perception and estimation, acceptance of idea about a variety of forms of display of human individuality; the tolerant attitude to distinctions between people; a recognition of ambiguity, debatableness of a problem of the attitude to people with impaired development, an openness to other points of view is typical for students with cognitive complex system of personal constructs.

The work on formation at students of the personal-semantic attitude should consist of comprehension of the own attitude (revealing of motives, needs, values being sources of the attitude, comprehension of its consequences and meaning for life of these people and directly for the student, definition of fact to what degree the activity of the expert can be based on the given attitude), and also of cognitive complication, enrichment of personal constructs' system, underlying students' perception and estimation of the person with impaired development.

The experience of complex psychological and pedagogical support of the child with epilepsy

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Peculiarities of mental processes and personality, typical for patients with epilepsy were properly described in the medical and psychological literature [Isaev D.N., 2001 Kononova M.P., 2000; Ljapidevsky S.S., 2000; etc.]; displays of asthenia and the reduced efficiency, slowness and inhibition of all reactions, a pedantry, rigidity, reduction of attention's switching, pathological strengthening of an interference in memory, strengthening of mechanisms of a retro and proactive inhibition, the phenomena of amnesic aphasia. Typical processes of thinking are: jamming on details, reduction of a level of generalization, weakness of abstraction. In emotional and will spheres the increased sensitivity, easy vulnerability, and the steady, intense, viscous affect the increased irritability, obstinacy and roughness is marked.

According to L.S.Vygotsky position, at the pathological processes in a child's brain the mental functions suffer first of all and natural mental functions suffer to a lesser degree. A direction of infringement is "from bottom to top upwards". However, in a case of epilepsy the other direction of infringement takes place too – "from the top downward" This means that the greater (or equal) infringement of basic (natural) mental functions in relation to the supreme mental functions. Thus, there is an infringement of both elementary (natural) mental functions, and the supreme mental processes.

Therefore there is a necessity of development of programs on psychological correction (treatment) both for development (restoration) of natural mental processes, and for development of the supreme mental functions.

The description of a case

Vera P. The age at the moment of initial medical examination (March, 2005) – 7 years 5 months. The left-handed. The diagnosis at the moment of discharge from a maternity hospital was perinatal encephalopathy, a convulsive syndrome. Convulsive attacks were marked from 4 day of life. In the age of 7 months on EEG the center of pathological activity in parietal area was registered. She took various anticonvulsant medicines to the moment of initial medical examination the child during some months were without medicine therapy. The frequency of epileptic attacks reached 2–4 per day. Convulsive attacks were accompanied with salivation and vomiting. There were also difficulties with falling asleep.

As a method of diagnostics of psychological development of the child the method of neuropsychological diagnostics, based on the theory of system dynamic localization of the supreme mental functions that was developed

by A.R. Lurija was chosen. The variant of techniques adapted to children's age (by Semenovich A.V., 2002) was used. For development of the correctional program the initial neuropsychological diagnostics directed on definition of the current level of mental processes' development (a zone of actual development according to L.S.Vygotsky) was carried out. On the basis of neuropsychological diagnostics' results it became possible to speak about the rough functional deficiency mainly of the left hemisphere that was shown in:

- reduction of function of programming and control of the behaviour;
- the phenomenon of speech adynamia ;
- infringement of the phonetic and phonemic analysis and synthesis, of (acoustic) hearing-speech memory (both mechanical, and intelligent);
- infringement of the visual – spatial analysis and synthesis, a visual memory.

Among safe parts of mental sphere, which could become a basis for correctional and developmental lessons, as the basic were allocated the following:

- visual memory-recognition;
- visual – spatial gestalt-perception (gestalt-recognition) and the analysis;
- kinesthetic analysis;
- preservation of cognitive interest in the form of game.

The basic attention was given to correct victims who had suffered most from disease of processes – (1) functions of regulation, programming and the control of activity and (2) visual and spatial spheres. But at performance of tasks all systems of analyzers were involved to provide formation of new functional systems on the basis of which the damaged mental processes would be built (Tsvetkova L.S. 2001).

Individual correctional work was carried out with use of developing materials of M.Montessori. The materials developed by Montessori and his pedagogical system allows to develop separate properties of a child on a separate material (the size, color, form etc.) to generate new interfunctional connections (visual – impellent, visual – tactile etc.). The didactic material provides five types of mistakes control: mechanical, psychological (with the help of sense organs), by means of control points, control set, and the teacher (psychologist). In this case it appeared especially significant as the greatest difficulties at the child were marked in a part of the control.

For development of the visual — spatial analysis and the control the silhouette and painted over images were used, the cubes of Nikitina, “a geometrical locker“ and M.Montessori’s cylinders, various meccano, graphic dictations, finishing of images, colouring of graphic ornaments, dealing with origami, writing on whistle, recognizing of subjects by means of the touching, etc. Lessons also were devoted to development of space of child’s own body and space of a class where were the lessons took place. (Semenovich A.V., 2002; Tsyganok A.A., Gordon E.B., 1999].

To memorize non-verbalizing pictures, groups of subject pictures, associated rows of figures and words were used for develop visual and (acoustic) hearing-speech memory. Rough letters and figures, and writing with fingers on whistle were directed on consolidation of graphic images of letters and figures.

At the development of memory the basic attention was given to development of intelligent memory. With this purpose, and also for development of speech and function of the control and programming, we used the retelling the read story. If the child had troubles to do it we developed activity (took out it outside), using for these purposes intermediaries — counters, cards, — the amount of them corresponded to number of semantic parts in the story, to number of sentences or to the amount of words in the sentence.

To develop of a keen motility of a hand we used designing of beads from details of the different size, drawing on whistle, work with plasticine, scissors etc.

With the purpose of removal of an emotional pressure we used techniques of a muscular relaxation and optimization of a muscular tone. At the same time the exercises directed on development of brain’s interhemispheres interaction were used (Semenovich A.V., 2002).

Individual correction-developing lessons were carried out since April till May 2005 and since September 2005 till April, 2006 two times per one week. Duration of lessons made from 40 minutes till 1 hour. During each lesson the tasks directed on activization of all mental processes were used.

Repeated neuropsychological investigation was carried out in May, 2006. The comparative analysis of the data of initial and repeated neuropsychological data allowed to reveal the following dynamics in the psychological status of the child:

- Improvement of attention (average time of search of 20 numbers at Schulte tables has decreased from 245 up to 166 seconds.);
- Smoothing of symptoms of kinesthetic dyspraxia
- Increasing of stability (acoustic) hearing-speech memory to interfering influences (the deferred reproduction was improved from 3 up to 5 words);

- Improvement of spatial thinking;
- Development of left hemisphere (gestalt) strategy of the visual — spatial analysis and synthesis;
- Increasing of integrity in strategy of copying of figure;
- Improvement of verbal — logic thinking (in a technique “the Fourth is superfluous“ the amount of truly fulfilled tasks has increased from 0 up to 7);
- Reduction of emotional uninhibition (расстромженности) and explosiveness;
- Steady paragnosia at perception(recognition) of dimmed pictures;
- Low volume and firmness of a visual memory;
- Preservation of metric and topological mistakes at copying figure;
- Steady troubles with putting into shape of the ideas in speech.

These results testify that the most steady to correctional-pedagogical influence were those mental processes, which psychophysiological maintenance was connected most closely to injured parts of a brain cortex. In the examined case such parts were of parietal-occipital zones of a cortex of the left hemisphere and frontal departments of a brain. With the first ones the successive visual — spatial analysis is and memory is connected, with the second — the regulation, programming and the control of behavior, voluntary attention and speech activity.

From the data mentioned above it is visible, that at the case of given child the functions connected to frontal structures yield to the greater correction in comparison with the functions connected to parietal-occipital structures of a brain cortex.

Simultaneously noticed improvement of spatial and verbal — logic thinking we categorize as due to improvement of functions of frontal departments (regulation, programming and the control), and improvements of functioning of zone of a cortex of the left hemisphere responsible for quasispatial analysis and synthesis.

Thus, the treatment (psycho-correctional) program has resulted in positive changes in the mental status of the child. The most resistant to correctional influence appeared the mental processes which psychophysiological maintenance was most closely connected to damaged parts of a brain. These data confirm L.S. Vygotsky theory.

It is necessary to note, that the changes described above became possible only on a background of medicamentous therapy with anticonvulsive medicines that have resulted in practically full disappearance of epileptic attacks.

Event in structure of the biographic text

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The life of each person as a unique existential adventure is interesting not only and not so much due to presence of universal but due to how many meanings is found due to individual ways of coexistence with the world, and construction of unique internal reality. Process of personal “self-presenting”) makes the person “to become the sign of him/herself”, dividing his/her own integrity of values, which constitute semantics of private life.

Unpacking of person’s own senses for others occurs in mediated way through a sign, word, and text, including autobiographical narrative. Building him/herself for another, the person not only orders and designs him/herself as a part of the world contemporary to he/she, but also creates contours of another Self while absent in life, but able to appear as result of realization of “the ideal project” (S.N. Bulgakov) chosen by the person for self-realization. Presenting him/herself in texts, the person certifies a way of the existence in social space and simultaneously verifies his/her meanings.

Any text can be described as rhetorical amplification of the certain judgment, and this idea fits very much to construction of the text of the curriculum vitae. Analyzing quasi biographical texts, which are created by preschool children, it is easy to notice that these texts are expansion of the fundamental statement “I am”, certified by name, the presence of parents, things belonging to the child and so forth. Then these texts of the simple self-certificate, being unwrapped in time prospect, become autobiographical, in part metaphorical, in self-presentations, keeping the existential “I am” in the basis.

If we count as the unit of life the events constantly occurring with the person or actions and cases in all their significant and insignificant attributes for the person (a reality) thus including them into the autobiographical text then we have the transformation of a case into the event (event-for-Self) due to involving into what is happening and nonindifference to its meanings (M.M. Bahtin) and amplification – biased investment of content that is superfluous in relation to it that was gathered from own meanings of the person, transforming living into experience.

At construction of an autobiographical narration a conditional first phase (a level of a history) is the selection of events for the purpose of current dialogue. The status of the “own” event and the actual contents) of narrative is focused on “here-and-now reality-response” of external or internal listener. The autobiographical

text exists as the active figurative – verbal form of personal meanings’ embodiment. The second phase (a level of narration) is narration itself as result of composite construction of the biographic text connecting situations, characters, actions in such order, which is necessary for the subject. At this level the forms, narrative figures and plots are selected. In the narrative structure the event sometimes is exposed to apocryphing and even to distortion. The last third level (verbalizations of narrative) is the presentation of the narration, which is oriented to the listener including intonations, pauses, tempo and rhythm of narration and the style patterns, peculiar to the concrete storyteller.

If on the first phase the high importance has personal including in an event so narratization “strengthens” the significant moments of event due to saturation with the details gathered from semiotics resources of culture. This creates the paradoxical impression that uniqueness of the own event looks for the person more authentic and convincing if he/she appeals to available cultural prototypes. It seems that the culture, attaching the person to its resources, simultaneously “pulls out” from his/her hands the individual life experience, forcing him/her to describe it in common cultural categories. Ability to resist influence of the cultural prototype and to build the self-descriptive text deviating from typical plots with the purpose of fixing own meanings may be seen as “integrated heroism” of each subject.

Analyzing the features of the events included in an autobiographical narration, the author of article has allocated some moments in their understanding.

First of all, it is “eventual expectations” or “existential readiness” of person to event – an original condition of cognitive and emotional tension, expectations of situations which supposedly “should occur” in life. The person beforehand forms the attitude towards these future incidents as to events and becomes superfluously attentive to those “zones” of daily life in which their occurrence is probable. Attributes and meanings of similar vital situations are familiar to the subject under the texts mastered through socialization. Special value have the texts which are carrying out the function of precedent, in which the meanings of the future cases act for person in the first / exemplary form. Their function, between others, consists in preliminary “sectoring”, “programming” yet not holding way of life, filling it with semantics with the help of common cultural means. In the body of culture objects and the phenomena are sup-

plied with the big variety of attributes, and the task of the texts used for early socialization is to build in consciousness the precedent system of preferences of one value to another.

The second important point – the amplification, creation of “the rich description“ which is understood as superfluous saturation of the certain case by personal meanings, including the attributes which create an opportunity of certain interpretation of knowledge having place in conditions of social codes.

The third moment – symbolization – acts as conscious action of the subject as creator of the text version of his/her own life where certain event gets the status of a biographic symbol. It is possible to assume, that in course of life a certain event can be experienced as symbolical display of all life events of the person (as motif of all life). Creating the autobiographical narrative, the person creates meanings and symbols, forces meaning to exist through him/her: the meaning is not a principle and not an original cause; it is a product of life creating. Symbolization reflects in the form autobiographical narrative – ascertaining, performative, didactic, symbolical, etc. It is also possible to speak about semantic hierarchization of life events in the individual biography. However the person perceives all events included as unique, individual, given in experience only him/her irrespective to how much they are filled with meaning. Such events can be connected with the secrecy of the person connecting him/her with something bigger, than he/she is (the God, space, fate).

To understand the processes of putting in order and structuring of autonarration the author offers to use a metaphor of a coherent (binding) wave. “The Coherent wave” is the mental process of constant putting in order the built autobiographical hypertext: after transformation of the certain incident into the own event, this new event compels the narrator to reconstruct his/her available biography with the help of ascending and descending narrative transformations. The person is compelled to correct and even it is essential to change the contents and meanings of some fragments of his/her autobiographical narrative to place in the past the labels testifying to an opportunity and necessity of come this new event. Moreover, this “wave” demands forming certain

strategies about the future incidents and cases (the logic of happening of one event pulls behind itself the logic of others, forming new sequences).

“The Coherent wave“ not only generalizes individual events in a sequences, but connects histories, life plots one with another and generalizes them up to extremely compressed form – “meaning of the life”. For this reason, while life lasts, stories about themselves can vary essentially. The metaphor of a coherent wave also explains the fact, that in course of life in the person’s curriculum vitae the built-in fragments being a pure product of imagination can appear.

The important function at construction of autobiographical narrative has “the ontologic pulse“ carries out (G.L. Tul’chinsky)/ It means that to desirable or due the person gives the existential status (“let it will be...!“). It is not simply certain assumptions or suppositions of the person, but almost target constructions of his/her consciousness, capable to design for him/her a reality of the future incidents. Not only the personality builds the text of his/her own life, but also the text builds the personality. The question “that would be, if I did not...?“ is completely not idle for person because his/her individual history is the set not only of that really was, but also of that could be. And the growing volume of the facts which have not come to pass in his/her life narratively establishes the meaning of that ones, which have come to pass (M.N. Epshtejn).

One of the essential moments in construction of autobiographical narrative is presenting of “the feeling of possible“, “feeling” if“ “ (M.N. Epshtejn). It means that in comprehension of life event as the event, the person every time experiences intuitive expansion of those ideas and feelings, which accompanied it (the event).

The text of the curriculum vitae created by narration not only allows the person to order and systematize him/herself, to experience better his/her own authenticity, but also carries out function of a mirror in which he/she repeatedly can see him/herself as other one and choose him/herself the real. Each subsequent life stage incorporates into its semantic structure the opportunities of previous stages, that explains the principal increasing of opportunities with age, but at the same time sets borders to the personal development.

About the phenomenology of learning task setting and solving in a developmental teaching: An attempt of integration of ideas by V. Davydov and J. Dewey

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This article is an attempt to integrate the ideas of V. Davydov and J. Dewey as applied to the analysis of child capacity to set and solve learning tasks. These scientists expressed very similar ideas concerning the role of theoretical knowledge in education and development of a younger generation, their views on integrity of essence and methods of teaching as well as a distant effect of knowledge as an ability to apply it in unpredictable situations were also very much alike. They both tried to overstep the limits of traditional formal approach to the system of education in general. They believed that it was impossible to convey knowledge from teacher to a pupil in its finite form; it was necessary to acquire it in the process of thinking.

The learning task is the one that makes a pupil look for a method of solving of all the tasks of this type. In his book "Typy obobshcheniya v obuchenii" (1972) V. Davydov gives the following definition of the learning task; "The learning task suggested to schoolchildren expect from them the following things: 1) analysis of the facts leading to disclosure of their generalized relations to different forms of their appearances, i.e. formation of essential abstractions and essential conclusions; 2) their synthesis into a certain integral object which becomes a sort of a "cell", an image of a real object; 3) a mastery of the general way of constructing the object under study in the course of this analytic-synthetic process. In solving the learning task schoolchildren discover the nature of the "cell" of an object under study and with an aid of this "cell" they can reconstruct the object in their mind. Thus in solving the learning task schoolchildren realize a sort of micro cycle of ascending from the abstract to the concrete path of theoretical knowledge assimilation (p. 151–152).

The learning task is a key point in D. El'konin and V. Davydov's theoretical approach to the learning activity. They regard it as pupil's solving of a system of learning tasks that are arranged so that to provide the assumption of theoretical knowledge in the direction from abstract notions to concrete ones. It takes place at the level of a school lesson as a micro cycle. It is necessary to mention that a learning task is a result of a logic analysis of the content of learning. It can be taken as rel-

atively independent from the variety of learning conditions. The essence and the sequence of learning tasks in studying each subject are arranged in accordance with the elaborated in the society attitude to the substance of these subjects.

At the same time V. Davydov mentioned that psychologists and tutors often suggest quasi learning tasks to school children. School-teachers do not understand clearly both the essence of a learning task and its place in a learning process. The culture of setting of a learning task is not formed.

In the judgments of the author of the article this problem roots in scanty knowledge of phenomenology typical for the process of theoretical knowledge assimilation. He states that within the concept of developmental teaching the logic- psychological analysis of solving the learning task is massed in its second part. It starts with the pupil's disclosure of "some general relations connected with different displays of the object under study", i.e. when he sees in a learning task something common to other tasks of this type. This was the first definition of a learning action aimed at solving the learning task, namely: "transformation of problem situation with a purpose of disclosure of general relation of an object under study". Then other learning actions follow: "modeling of the disclosed relation in an object, graphic or literal form; transformation of a relation model to study the quality of relation just as it is; framing of the system of partial tasks that can be solved in a similar way; control of the previous actions and estimation of the level of assimilation of the general relation as a final stage of solving a learning task". (V. Davydov, *Problemy razvivayushchego obucheniya*, M., 1986, c. 154)

The cultural analogue of this sequence of actions was borrowed from the structure of a scientific research activity, namely the way scientists present the results of their studies.

These subjects are social in a double sense. They represent the tools which society has evolved in the past as the instruments of its intellectual pursuits. They represent the keys which will unlock to the child the wealth of social capital which lies beyond the possible range of his limited individual experience. While these two

points of view must always give these arts a highly important place in education, they also make it necessary that certain conditions should be observed in their introduction and use. In a wholesale and direct application of the studies no account is taken of these conditions. The chief problem at present relating to the three R's is recognition of these conditions and the adaptation of work to them.

In contrast Dewey gave a detailed description of phenomenology of a thinking act up to the moment of obtaining the first result of thinking. We recommend paying attention to three main aspects in Dewey's approach: 1) availability of ideas in child consciousness which make him able to hypothesize about the way of solving the task settled; 2) pupils readiness to take a risk of solving the task by means of actualizing the means of solving s/he possesses; 3) pupils bias attitude to the result of his/her mental act (John Dewey, *Democracy and education*).

As well as V. Davydov J. Dewey exemplified the cultural pattern with the help of research activity of scientists having focused on its experimental part. He found similarity between thinking of scientists and theoretical thinking of people occupied in other intellectual spheres of activity. In a learning process this type of activity displays itself as a mental experiment related to a concrete object.

It is from this standpoint that the author of the article tries to analyze the situation of teacher's problem setting and pupil's attempts to solve it. Three distinguishing features of a learning task as an object are presented by the author below.

First, the learning task cannot be solved practically or on the basis of already known means of solving the tasks like that. Second, the pupils should possess the necessary prerequisites for its theoretical solution being guided by previous experience of comprehending the real objects. Third, the task should be the one in a line of other learning tasks arranged in logic of ascending from abstract to concrete notions.

In accordance with it the psychological conditions of task setting by a teacher were examined. The author comes to conclusion that the moment of teacher's action with a learning task as an object, and correspondently a pupil's action with it, dropped out of sight of psychologists and methodologists. One of the most frequent mistakes of school-teachers is fragmentation of a learning task into several smaller ones, which he regards as more familiar for children and easily understood in course of solution. Taken separately these tasks can be solved easily and do not demand much effort from a child. The effect of novelty vanishes. Yet, as Dewey states it, the hypothesis should be examined experimentally otherwise the act of thinking remains incomplete and it is impossible to carry out a true reflexion.

It also appeared that in case of fragmentation of a learning task children do not feel it necessary to reconstruct in their imagination the events of the previous lessons as specific acts in a thinking "drama". Yet in solving the learning task the "history" of the initial abstraction underlying the general way of solving such like tasks must be reconstructed.

Let us assume that a learning task is presented in a correct form. The pupils verbalized hypotheses concerning its solution. In learning activity the usual way of testing the hypothesis is discussion. The main teacher's task is not to let the object of a learning task go in course of discussion.

The author disagrees with V. Davydov (*Teoriya razvivayushchego obucheniya*, 1996, p. 159) that the first learning action introduced should be an "acceptance of a learning task. The thing is that we can estimate the effect of this action only in the form of a pupil's disclosure of general relation in an object. Only in this case we can take it as "accepted" by a child.

Let us assume that one of the hypotheses is accepted and becomes a platform for transformation of an object. So the first learning action is carried out: the object is transformed, the initial relation is singled out. Now it is necessary to fulfill the second learning action, i.e. a modeling of an initial relation. Here appears again a specific task of a teacher — to keep the children's attention engrossed to isomorphic relations between an object and its model. Otherwise the moment of testing the hypothesis could appear problematic. As we mentioned above the testing of hypothesis is an important moment of thinking act. So it is necessary to focus on the actions aimed at solving the initial task with the help of the acquired methods of solving such like tasks. In Davydov's concept this action is actually included in a learning action, connected with formation of a system of learning tasks. That is why the author of the article thinks that the solving of a practical task should be treated as an independent learning action.

Analyzing further the process of learning task solving by children the author gives a different from Davydov's definition of controlling and estimating actions. The act of control closely connected with the solution of a learning task is a measure of correspondence of child's practice to the highest level of its perfection. The action of estimating connected with the solution of a learning task is in fact an identification of the possible limits of the method of solving the task.

In conclusion the author states that phenomenological analysis of setting and solving a learning task doesn't have pretensions of an ultimate answer to all the questions. It is rather an invitation to go on a study of the concept of a learning activity.

The sign systems replacing natural language

R.M. Frumkina, T.E. Braudo

Our knowledge are based on opportunities to operate with signs and sign systems. The basic and universal sign system providing development of intelligence of the person and processes of cognition is a natural language. From birth, genetically, the person has an opportunity to master language. All development of the child, his/her way of transformation from biological being into social being is provided with mastering by natural language in dialogue with other people.

The certain part of children is born with such psychophysiological infringements which deprive the normal opportunity of natural language mastering for the child. They are children who is deaf from birth and became deaf at early age, visually impaired and hard of hearing, autistic etc.

If in relation to these children the measures are not undertaken, which allow providing them with access to mastering natural language or other sign system anyhow functionally replacing natural language these children are deprived of perspective of some adequate intellectual development. This statement is not new. But, unfortunately, we have either intuitive experience of teachers, bringing up these children, or abstract models of the linguists deprived of explanatory force.

Process of mastering the native language as consecutive mastering sign operations in essence was not studied, particularly how duly development of speech provides sign support for fundamental intellectual operations. We shall emphasize, that practitioners collected huge amount of observations concerning processes of becoming of children's intelligence. But there is no advanced theory, which, for example, could be called "the general theory of sign support of reception and fastening of knowledge".

In the article we examined some problems connected to it.

To develop normally child's intelligence it is needed that the language develops in time. An example of the sign system replacing natural language, can serve gesture language which help deaf persons to communicate (colloquial gesture language). This language develops only in collective of deaf persons. The way natural to normal sign mediating is closed for the deaf child who has not dialogue in collective. Only when the deaf child growing in family of hearing parents gets in special institution — for example, in a kindergarten for deaf children, he begins learning to speak. Being included in common process of the communications (dialogue with deaf persons, evolved in family of deaf persons), the deaf child seizes gesture language as sign system, that mediates all cognitive processes. Further it is logically to use this "native" for deaf children colloquial gesture lan-

guage for the pedagogical purposes as the sign system replacing natural language.

Opposite to a state of affairs in the environment of deaf persons, "nonspeaking" children at whom speech is not developed for other reasons, appear socially and psychologically lonely (children with alalia and autism). Opposite to children with alalia, which would like to communicate and speak, but cannot speak; autistic children initially have deaf child no need for dialogue and do not speak for this reason. The most actual appears to be the problem of the most primitive communications due to which the child could be understood by somebody else, except for mother who "understands" the child at a level of support of his initial needs. If to comprehend a problem of "minimally necessary" communications theoretically it looks as the following: for contact to the "nonspeaking" child it is necessary to search for the special sign system, which is carrying out functions, similar to functions of natural language. This sign system should be introduced from the outside, i.e. should be invented.

Following this general purpose, the western teachers, since 1960th, began to develop systems of so-called "supporting alternative communications" (augmentative and alternative communication). It is offered to replace the not generated speech by the communication with the help of images. Instead of attempts to form child's speech or to liquidate the individual speech defects. It is supposed, that the set of images basically can be used as the sign system providing certain practical needs at training and socialization of the "nonspeaking" child. Such artificial system should provide the effective communication. The opportunity of use of the system based on images, will allow "to remove (take off)" the direct dependence of prospects of child's intellectual opportunities development on his/her capability to master speech.

In any social situation the "nonspeaking" child appears sharply estranged from other persons who first of all are shocked by his/her inarticulate "speech" stream and also with impossibility of any social contact with him. As a result there is quite explained sensation, that replacement of speech with a picture can smooth this shock and avoid a communicative failure.

Some basic defects of such systems are specified in given article.

Natural language is a system, which carries out functions of sign support of various intellectual operations, including base operations of generalization and abstraction. Without mastering these operations the high-grade intelligence cannot be developed. But not all operations are accessible to children and not all means

offered by the adult, the child can use. For example, in works of mathematician A.K.Zvonkina's the process of mastering operations with figures at children of 5-6 years old is described. It is shown, that at classification of various subjects children do not use badges offered by the teacher. It confirms again, what natural language serves as strong support for formation of abstract concepts. Therefore the delays and infringements of development of natural language irrespective of their genesis inevitably conduct to impairment in development of intelligence.

The systems replacing natural language, based on pictograms, give at disposal of the "nonspeaking" child the pictures of a different level of abstractiveness. But they do not create the preconditions for developing of abstraction operations as transition from the represented objects to their essential attributes and further to a class, or from the image of characters to abstract representation about process of action as such.

For example the "Bliss" system most evidently expresses the basic tendencies in search of designing of adequate means, replacing natural language in concrete conditions of correctional pedagogics. The symbols used in "Bliss" are of planimetric plottings similar to usual typographical alphabetic letters and their combinations (brackets, an asterisk, a sign "sharp", signs for logic and mathematical operations etc.), geometrical figures. Symbols of "Bliss" are not focused on iconicity.

Opposite to "Bliss", pictographic images do not exist as the certain completed system with certain set of badges defined beforehand and postulated syntax. Both approaches are directed on replacing of words of natural languages with images, thus already enough high level of intelligence development and sign consciousness is supposed.

Let's return to a situation when mastering natural language represents the desired, but quite often-difficult

purpose to achieve. Absence at the "nonspeaking" child of opportunities to communicate on the base of natural language should not doom him to social isolation. Authors count possible to create the new system replacing natural language. It can serve as sign support of thinking development for so-called "nonspeaking" children and should serve as the bridge, which further allows "nonspeaking" children to move up to the communication with use of natural language.

In the offered system replacing natural language, actions can be entered with the help of gestures, objects of action — with the help of pictograms or photos, some relations — also with the help of photos, but the properties of subjects (by analogy to Maria Montessori's works) — through the skilled dealing with subjects (touching the appropriate surfaces, hearing of sounds etc.).

It is necessary to realize this approach as convenient and standardized material objects — tables and designs. The complex object created in this way will be a material fundament of the system, which allows to organize the process of signification at training of "nonspeaking" child at the first stages in rather standard way.

Steadfast fixing of stages of mastering signifying operations during training of the "nonspeaking" child allows us to observe ontogeny process, forcedly stretched in time and forcedly broken on rather artificial stages. We cannot make straightened speculations about the norm, on the base of our observations in sphere of pathology. But according to a principle "the latent in norm is obvious in a pathology", the analysis of transitions from understanding of gesture to understanding of its image, from the pictogram to a word and back, gives us super valuable material. We hope that in this way we can fill with the real content the idea of operations with signs and of their role in development of speech and intelligence.

Internal conflicts of teenagers

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In this article the problem of development of inner-personal conflicts at teenage age which are not realized neither by teenagers, nor by adults which are significant for them and therefore creates the ground for development of deep crisis emotional experiences and, as the consequence, the deformed neurotic development of the person.

The author opposes the ratified passive position in psychology concerning the critical periods in person's development, The author's point is that personal new formations in each subsequent age period, leveling a social situation of development of the previous age, should not necessarily become the reason for neurotic development of the person.

In modern psychology the representation about inevitability of age crises was thoroughly enough ratified. Psychologists even created the special concept "normative crisis", that, in our opinion, is disputable. To be reconciled with inevitable difficulty of teenage age is a norm for today. Nevertheless, the unresolved internal conflicts at the teenage age, turned in "neurotic stratifications", considerably complicate ability to live of the person during all subsequent life.

Internal conflicts is a sphere of problems in person's development, caused either by the struggle of opposite needs, values, interests, inclinations, points of view, etc., or by frustration of personal significant needs. The author considers as the personality the person's system of relationship with himself, with other people and with environment as a whole. Personality's development, from the point of view of cultural – historical theory, represents the process of interiorization of content of "the social situation of development", that is mediated by individual features of the person. The process of interiorization in ontogenesis represents mutually conditioned activity of subjects in relation to each other where it is impossible to carry out the "border" or "line" between their activity, in particular, – between activity of the child and the adult.

The concept "the internal conflict" is closely connected with such inner personal conditions, as crisis and neurosis. Psychological crisis develops in conditions of the long internal conflict. Neurosis or a neurotic condition is the unrealized protective reaction of the person to proceeding psychological crisis. (V.N. Mjasishchev, 1995; A.A. Aleksandrov, 1997; A.I. Zaharov, 1988; K. Horni, 1995; F. Perlz, 2001 etc.).

The analysis of various theoretical approaches for understanding of the reasons of occurrence and dynamics of display of internal conflicts indicates, that only supporters of orthodox psychoanalysis believe in inevitability of basic conflict, impossibility of its settlement and, as consequence, in inevitability of neurotic development of the person. But already representatives of neo-psychoanalysis, namely, K. Horni, are convinced of potential opportunities of the person to change productively during all life and to overcome crisis and neurotic conditions. K. Jung's analytical

psychology, the psychological theory of a field of K. Levin, gestalt-psychology in F. Perlz works, the theory of cognitive dissonance of L. Festinger, the humanistic theory of person's development of K. Rodgers, A. Maslow, R. Mey, addressing to a problem of internal conflicts, show different sides of display of internal conflicts. But they converge in some points: when they 1) emphasize a role of parent-children's relationship in development of conflicts in the various periods of becoming of the person, and 2) give crucial importance to development of psychologically mature person in overcoming conflicts. The problem of criteria of personal maturity and ways of its achievement is extremely actual for modern psychology and requires for separate consideration.

In Russian psychology the theory of internal conflicts of V.N. Mjasishhev deserves the special attention. Substantive points of his theory are the following: 1) absence of direct connection between neurotic development and constitutional features of the person, consideration of congenital factors as only ones of conditions in a number of others. The second position is an absence of a direct connection between strong affective conditions, shocks, losses and development of the internal conflict. V.N. Mjasishchev allocates the greatest role in development of internal conflicts to those relations and connections with the reality that developed during life experience, in mutual relations with relatives, a significant environment which forms attitudes and reactions of the child to the phenomena of the reality. The role of adverse relations in the critical phases of person's development when he/she is most sensitive to external influences is especially emphasized. The internal conflict arises in a situation of frustration of personal needs or unproductive way of their satisfaction for the person (V.N. Mjasishchev, 1995).

There is a known polemic around of a question on inevitability of age crises (L.S. Vygotsky, 1984; A.N. Leont'ev, 1975; D.B. El'konin, 1997, 2004; K.N. Polivanova, 2000 etc.). The psychologies, counting these crises as inevitable, are guided by position, that if there is such a reason as personal new formations so the crisis is inevitable.

We proceed from presupposition that new formations of person are shown in development of his/her new needs. If these needs are satisfied adequately for personal development neither internal conflicts, nor crises, especially neuroses cannot arise. It is necessary to separate personal new formations from crises and not to make an indissoluble tandem of them.

In a question on an origin of new formations and needs of personal development that are appropriate to them, we adhere to positions of cultural – historical psychology and the psychological theory of activity. Personal new formations and, accordingly, needs of personal development are set by a way of life of the society itself, its cultural – psychological level and are shown through individual's "a social situation of development". As the main new formations in teenage age psycholo-

gists consider 1) development of consciousness at a level of self-consciousness, 2) development of conceptual thinking and 3) development of maturity feeling.

The self-consciousness is shown at teenagers by opening of the private world which during the process of maturation become more and more filled, and realized by the teenager as something especial, unlike others.

The conceptual thinking enables to analyze, to generalize, to build conclusions, to see distinctions between the phenomena. Only due to conceptual thinking the allocation of the private world, comprehension of its features and separation from the world of other people become possible.

“The Feeling of Maturity”, is frequently defined as the aspiration of teenagers to imitate adult people and is expressed in aspiration to look and behave in an adult way. The author objects to this treatment. Experience of consulting practice gives the basis to consider “feeling of maturity” in teenagers, as the complex emotional experience that consists of several feelings that are new to him. The main of them is a development of the critical attitude to the world of adults, and, as consequence, development of anxiety and depression due to disappointment in the adult world and in perfection of the world itself. There is a feeling of dispassionateness from close adults that further, at an adverse situation of development is transformed to opposition of to all adult world and to the world as a whole, including teenager him/herself.

“Feeling of Maturity “as the disappointment in perfection of the world, gives rise to one of essential internal conflicts of teenage age: the conflict of trust to the world, as collision of need to trust to the world of adults, and, at the same time, of attitudes to mistrust to it.

Comprehension of a private world that opens to teenager, opening of individual distinctions between people, gives rise at teenagers to the important need for his personal development: need for a distance and independence of associates and, first of all, — from adults. In this case teenagers experience the second internal conflict — the conflict of inconsistent needs when two opposite needs which are necessary for development of the person: need for a distance and independence and the same powerful need, but of opposite orientation — need for dependence and support. The acuteness of the conflict exists because teenagers do not realize this contradiction. Both these needs exist simultaneously and demand from significant adult their simultaneous satisfaction. Unfortunately, adults more often try to solve this conflict in the unilateral way: to satisfy one, or another need, leaving, thus, the conflict unresolved.

Conflicts of “Self — concept” are shown as a minimum in three directions: in reconstruction of “Self-image”; in the conflict of “self-estimation” and “self-attitude” and in the contradiction between real and ideal “Self- concepts”.

All teenagers experience the internal conflict of Self-image that arises as a result of sharp change of appearance, to some extent. If it is not possible to the teenager, by virtue of different circumstances to accept the new appearance crisis can be developed in a neurosis of nonacceptance of the appearance. The unresolved internal conflict of Self-image, can prove in the subsequent adult life through difficulties in dialogue with an opposite sex, disharmony in sexual relations, in difficulties of acceptance of the varying

appearance in the subsequent age periods of life and so on.

The conflict of the self-attitude, as a matter of fact, is the conflict between the rational (realized) and emotional (not realized) self-attitude. The inadequate self-estimation is a protective reaction to the internal conflict caused by collision of desire of a positive self-estimation with the not realized negative emotional self-attitude. The conflict between real and ideal Self- concepts in teenagers and at youth age does not cause deep internal experiences as before young people the prospect of the further development only comes off (C. Rogers, 1994, E. Berns, 1986).

The main reference point in prophylaxis and correction of the conflict connected to development of the Self-concept at teenagers is the open action of the adult based on the unconditional emotional — positive attitude to the teenager in a combination with absence of estimation, but at the same time, adequate reaction to his behavior.

The conflict in development of psychosexual function. In the recent past the development of psychosexual function was given to the spontaneous becoming but in modern psychology the same value to its development is attached, as to other major mental functions: to perception, attention, memory, thinking etc. The most essential internal conflict marked by many psychologists, beginning from E. Shpranger’s works, is shown in opposition of spiritual and physiological in mutual relation of sexes that is shown in the conflict of inclinations: a spiritual inclination — to one person, physiological (sexual) — to other person. Having fixed in teenage age, the duality of inclinations as neurotic stratification remains during all subsequent life. Negative influences of neurotic development of psychosexual function then are shown in inner-personal conflicts, in problems of matrimonial relations and in transferring of negative “scripts” to upbringing of children.

The main strategy in the resolving of internal conflicts is orientation to integration of opposite tendencies in development of the teenager’s person (A.I. Krasilo). Now in daily practice the unilateral approach when adults, unintentionally provoke the teenager to development of one tendency, unfortunately, prevails. Thus they create conditions for development of crises and neurotic protective reactions.

The solving of internal conflicts of the person of teenagers demands: 1) to not leave difficulty in dialogue with the teenager on “self-solution”; 2) during training process adults (parents and teachers) should take the responsibility on themselves for adequate satisfaction of personally significant needs of the teenager; 3) the adult should raise the psychological competence of laws of personal development in ontogenesis; 4) it is necessary for adult to be able to react not to the external, behavioral displays which are frequently not reflecting true problems, but on deeply internal motives of their behavior usually not realized by teenagers; 5) during dialogue with the teenager it is necessary to allocate needs of personal development which have not found satisfaction and provoke internal conflicts; 6) it is necessary for adult to study to build the adequate mutual relation capable to satisfy productively needs of personal development of children and teenagers; 7) It is necessary to create a wide network of psychological service for adults with the purpose of the decision of their internal problems and increase of competence of dialogue with children and teenagers.

Speech and practical intellectual activity of a child

L.I. Bozhovich

Judging from the preliminary comment of I. Korepanova, published in three successive issues (№ 1–3, 2006) in early 1960-s L.Bozhovich's work was passed by A.V. Zaporozhets to V. Zinchenko to be used in their co-authored chapter "Development of thinking" as a part of a book "Psychology of preschool children".(M., Prosveshcheniye,1964). Another and a very similar copy is in the archives of L.Bozhovich belonging to her relatives.

The manuscript copy contains the exact date of its originating and the purpose for which it was written. At the beginning of the text the date 1929 is mentioned as the year of the beginning of an experiment. It also states that the work lasted for three years, i.e. at the time when L. Vygotsky was alive yet. As far as the content of the text bears similarity to findings described by L. Vygotsky in his work "A tool and a sign" it is easy to suppose that the manuscript describes the study carried out under Vygotsky's supervision. Numerous citations from his texts part of which have references to the text of "Thinking and speech" testify in favor of this supposition.

In any case we can suppose that the study mentioned above was conducted in course of the program elaborated by Vygotsky which was aimed at the development of cultural-historic concept and its results were discussed with Vygotsky more than once. It is well known that one part of this program concerns the experimental examination of the hypothesis about the dynamic link between speech and thinking in ontogenesis. (R. Levina, A.V. Zaporozhets, L. Bozhovich).

Bozhovich herself reported that the study on the problem of thinking and speech was conducted by L. Vygotsky and his co – researchers both in Moscow and in Kharkov at the Ukrainian Psychoneurological Academy (its Psychology department). The results obtained allowed not only to come to some new conclusions related to the problem under study but also to elaboration of some new general psychological principles. Thus the study fell to some stages differing from each other both in their basic principles and the methods of study. That is way we preferred the path of history narration giving a possibility to present the development of practical intellectual activity of a child within the accepted concept of psychic development to a usual systematic report of experimental data.

From the above mentioned assumption the material of the article is subdivided into three parts:

1. Investigation of speech functions in development of practical intellectual operations.

2. Investigation of speech following the task solving connected with mechanical ties and relations.

3. Development of generalization and practical intellectual activity in children.

See below the theoretical conclusions of the study.

The hypothesis of the primary experiments stated that practical intellectual operations and speech are internally interrelating at a certain stage of their development. Later this hypothesis was substituted by a new theoretical approach to human thinking and speech as rooting from one basis. This new hypothesis was a starting point for itemization of problems concerning some experimental sessions that were carried out.

Study of thinking and speech in those complex interrelations they displayed in our early experiments showed that it is at a relatively late stage of development that the child appears capable of verbalizing the nearest goals in speech. Further study of these very practical intellectual operations helped to formulate the statement that even the pre-speech intellectual actions of a child are different from those of higher animals, at that the difference is connected with specific and typically human traits of child generalizations. They are actually the generalizations having speech origin provided by words as their material bearers. The fact of "convergence" of thinking and speech is the initial point of development of both child's speech and thinking.

Emergence of thinking as an activity representing object-related reality is inevitably connected with a development of child's human, i.e. social relation to the surroundings and the last makes a foundation for his/her development of object-related, meaningful and thus actually human speech. In order to become meaningful the word should attain the generalized quality. The subject's activity underlying generalization and especially the one implementing child's practical relation to reality and his/her communication ("spiritual relations" to other people) are initially interconnected.

Speech and activity development are two sides of a general process and they interwine with each other even when the process falls into two parts. The correlation of speech and practical intellect which we detected in our first experimental sessions expresses not the beginning of their crossing but a later divergence of already detached forms of an initially indivisible activity and establishing new interrelations on their basis. The thing we regarded as a display of abstract interrelations between intellectual activity and speech is to be under-

stood differently and more specifically: it is a relation of intellectual activity in a form of a practical activity and intellectual activity in a form of speech thinking activity, i.e. discursive or theoretical activity.

The development of this theoretical activity of speech thinking reveals not only its dependence on practical activity development, but at a certain stage of development lagging behind. "The happening" of a thought in speech appears at this stage of child psychological development decelerating from its fulfillment in practice. Only at higher stages of development (in our experiments only in senior subjects) this correlation changes: discursive, speech thinking becomes prominent. But this stage- the stage of discursive thinking- lies outside our present investigation.

The study of development presupposes understanding of its internal driving force and exposure of its necessity. That is why we tried to direct our efforts at investigation of conditions of development and changes in generalizations that uncover themselves in child's practical intellectual acts.

The study of development presupposes understanding of its internal driving force and exposure of its necessity. That is why we tried to direct our efforts at investigation of conditions of development and changes in generalizations that uncover themselves in child's practical intel-

lectual acts. The carried out study of practical task solving transfer showed that it is determined to a great degree at this stage of development by that practical intellectual activity of which it is an inner part. Only now it is to be taken not as a system of operations, not as an abstract form, but as having specific relations determining it. In other words we need to understand the need and conditions of emergence of such operations as both providing the development of child's relations to reality and as a child's activity in its integrity and specificity.

By describing the latest experiments of ours which have brought us closer to this task we rather broke off than finished our investigation planned as a broad one. The reason of it is rather internal than external and it is connected with a logic of investigation and its development. The main conclusion we have drawn transports the task of our investigation into an absolutely different area, namely into the area of the so called practical intellectual operations as a specific form of child's sensible activity putting into practice his/her relation to material things and developing his/her communication. So our further investigation should have been the beginning of a new study opening an absolutely new frame of psychological problems. Their experimental working out is a relevant task of other series of investigations which will be the subject of further discussion.

About one of forms of acoustic agnosia confused articulation in speech and writing

R.M. Boskis, R.E. Levina

The article of R.M. Boskis, R.E. Levina was published 70 years ago (1936.) It's repeated publication accompanied by commentary of Tatyana Vasil'evna Ahutina that replies why this article is of great interest today.

It is known, that R.E. Levina was one of five nearest students of L.S. Vygotsky. Under L.S. Vygotsky initiative and with support of I.I. Danjushvsky she supervised over small correctional group of employees in Experimental institute of Defectology (now it is Institute of correctional pedagogics of the Russian Open Society). There is an indicative fact, that in 1935 R.E. Levina made ready for the press the big article of L.S. Vygotsky "The diagnostics of development and pedagogical clinic of the difficult childhood", published as the separate brochure in 1936. It was time when the mention of L.S. Vygotsky's name could entail the most serious consequences. In the article of 1936 the name of the Teacher also is mentioned. The authors approve that "confused articulation is not the homogeneous impairment in all cases. The mechanisms of confused articulation in different cases with similar symptoms can appear to be completely various". It is quite modern idea, which till now does not lose the urgency because many experts overlook about it and consider only symptoms, instead of mechanisms laying under them.

The researches in the field of pathology of speech are more often devoted to studying aphasic disorder whereas confused articulation is absolutely uninvestigated till now though it is the most widespread impairment of speech at children. Studying of this form of speech impairment is important not only from the pedagogical point of view, but also from a position of neuropathology and psychology. In the literature the confused articulation is described as the defect dependent on insufficient muscular force, reduced to every possible replacements and wrong pronunciations.

We think, that confused articulation is not the homogeneous impairment. The mechanisms of confused articulation in different cases of similar symptoms can appear to be various; thus in most cases they arise not as motor defect, but can have in the basis of impairment the sensory cause. Our research was carried out at clinic of speech disorders. Cases of confused articulation in the speech accompanying by confused articulation in the writing and reading were considered. We can raise the question about revision of traditional understanding of a nature of agraphia in alexia

The first case: Petya S., of 8 years 6 months, was directed to clinic EDI with complaints to illegible speech. The child has the high intelligence, confused articulation in speech and in difficulties in mastering by

the correct writing. He mixes some sounds. He replace sounds oppositional to each other, "b", "d", "g" on "p", "t", "k" and "f", "s" "sh" on "v", "z", "zh", mixes "r" and "l", uses incorrect mitigation, instead of "c" says "t" and has other defects. The same lacks are marked in writing. At excellent distinction of physical sounding of these sounds, the child substitutes opposition sounds in speech and writing and feels troubles when it is necessary to use this or that member of opposition. Owing to lack of skill to differentiate relations between pair sounds he makes mistakes also in writing.

In the second case (Vasya A, 12 years; 3 months, has arrived in clinic of speech EDI with complaints to difficulties in training in writing and unclear speech. The research has shown, that the boy has hereditary aggravation of pronunciation. He has good intellectual development with isolated defect of speech. In spontaneous speech there is a mixture of sibilant and whistling sounds, "r" and "l", "b" and "p". In written speech complex confused articulation is also brightly expressed. In this case with safe hearing defects of speech observably can have the source only in impairment n sphere of subtle distinction of some sounds ("t" and "d", "r" and "l", mitigation of consonants, sibilants and iotacism of vowels). Displaying of confused articulation in writing is kept till now, apparently, it grows out due to training as child who perceive normally the environmental speech, with leaning on the acoustical control while the way of his training should be of another type. His motor speech apparatus is safe. He copies off well, has subtle impairments of perception of colors, and spatial perception.

In both given cases we observed two deviations from the norm going side by side: confused articulation in a pronunciation and confused articulation in writing.

We are convinced, that in all cases without exception the difficulty to master correct writing it is necessary to expect the impairments in speech. However their recognition can appear to be inconvenient. Defects of a pronunciation can be very subtle, externally insignificant and well compensated. More detailed analysis in conditions of special speech clinic reveals these defects without special difficulties. For example, the boy Ts., 10 years old, was directed to the teacher with complaints to difficulties in mastering the writing as on the single defect (the teacher denies the confused articulation). Meanwhile at special research we have found out alongside with confused articulation in writing obviously expressed confused articulation in speech that consists of the following: mixture of voiced and voiceless sounds ("b"—"p", "d"—"t"), replacement of "r" on "l" and opposite, absence of mitigations and mitigation of firm consonants. At child's speech we found "sliding" sounds,

therefore it resembled a little the speech of the foreigner speaking in Russian.

In a science there is completely clear idea that confused articulation in some cases can be accompanied by impairments in writing. But at the same time these impairments are considered as isolated which can interact in one case and have no interaction in other.

The position in which the basis of understanding of these two impairments either as detached or as inducing one another seems to be incorrect to us. We assume, that both described impairments have a uniform nature. In the given cases we see the obvious concurrence of these defects. And the reason of the child is not able to pronounce correctly a number of sounds lays not in motor defect, but in the essentially changed perception of the child. The pronunciation, reading and the writing, suffer from identical defects so it is the perception of our speech. In our cases we have safe hearing, but there are subtle impairments in sphere of acoustical perception, which have caused changes of speech.

What are these changes? What psychological preconditions being necessary at mastering correct speech and writing? Physical safe eyesight is not the sufficient basis for vision and perception of semantic structures. Professor. L.S. Vygotsky specified that the human perception arise not as the sum of separate visual sensations and not as autonomic structures independent of meaning, but from initial semantic perception, which is the integrated activity by nature. In the absence of such integrated activity the perception of the agnostic arises. A number of new researches in the field of linguistics has shown, that in sphere of sound speech it is impossible to speak about casual sound combinations. Perceiving speech, we perceive not separate sounds which, being summarized, form speech, but correlations of these sounds among themselves. Human speech represents sound system where sounds are not the isolated units. Sounds form the certain relations between themselves. The child, just started to speak, makes mistakes, which specify that he can't catch these relations between

sounds. We believe, that the way of learning these relations lays through generalization of oppositional pairs ("b"—"p", "r"—"l", etc.) as elements of a single whole. For example, the phonetic analysis of "s" and "sh" shows, that there is a similar relation between these sounds. But in this case the attribute, which differentiate them one from another, consists not of sonority, as in the first case, but of the height of a sound.

The basic precondition, on the basis of which it is possible to master correct speech, is the development of this system or development of language consciousness. Process of speech mastering is not simply the process of mastering of sound combinations, but process of mastering the certain phonetic structures. We perceive not separate sounds, but correlation of these sounds. If such correlation is absent, the distinction also becomes impossible. Among the preconditions of language consciousness' development of the examined children the basic fact is absent: the correlation of separate sounds into system.

Cases of optical agnosia are well known. In spite of safe eyesight and perception of separate physical sensations the complete, integrated, semantic perception of objects of environment is impossible.

Now in modern neurology the view of perception as an integrating activity is widespread. And it is visible in sphere of acoustic perception. In the described cases takes place underdevelopment in sphere of integrating activity of acoustic perception which according to its symptoms can not be named differently, than acoustic agnosia. The child in our case incorrectly speaks and writes not because he suffers from some motor defects of the speech apparatus as it was considered earlier. It seems to us that in a basis of both these defects, lays the impairment of perception of environmental speech. We tried to explain, what exactly hides behind the diffusive concept of "acoustical attention" and we believe, that to understand the alexia and agraphia it is also necessary to search for roots of these impairments at the same acoustic sphere.

Problems of speech development and language acquisition in the work of L.I. Bozhovich

Y.D. Bozhovich

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L.Bozhovich is famous for her research in the area of child personality development. Not many psychologists are familiar with her early and little known studies devoted to speech development and language acquisition. These works are few and some of them were never published. At first glance they may seem short episodes in her scientific biography. But it is not exactly true. Her interest in child personality and its age-related changes became evident at the beginning of her scientific work. She focused mainly on the problems of impulsive and voluntary actions, affect and intellect relationship, dialectical links between the conscious and the unconscious, dependence of a function on an integral psychological system to which it belongs as its part.

The theoretical background of Bozhovich's study was a cultural-historical concept of psychological development elaborated by L. Vygotsky, to which she was a devoted inheritor.

Over a period of 1931–1934 Bozhovich studied the problem of interplay between speech development and visual-active thinking in children. She demonstrated that there was a “specific formulae” which can characterize the link between speech and visual-active thinking at different ages.

Significant changes were discovered in the content of children's utterances. With age the utterances which are not task-related disappeared from children's speech. Speech that follows object-related activity gradually loses the quality of a “verbal mold” of the action performed, it now contains a verbal summation of the solution found; it reflects the important aspects of the situation of acting and the activity itself. It helps a child to distinguish the action from its context and to determine certain features of a situation as significant conditions for acting. The speech function of planning grows out of the type of egocentric speech which accompanies and confirms the action.

Having become verbal, thinking appears more accessible to a child's cognition as a specific activity. Verbalized planning that primarily serves as an external activity gradually becomes an internal one. The child's word mediated, object-related actions significantly change the structure of visual-active thinking and create conditions for emergence of new and more complicated forms of thinking. At the same time speech itself changes: inner speech as the major form of thinking is much more frugal and compressed than external forms of speech.

This study, which was one of the earliest studies conducted by Bozhovich, demonstrated her interest in the

process of the child's gradual overcoming of his/her impulsiveness and emergence of voluntary behavior. It is connected with the child's capacity to delay or “hold in check” immediate (spontaneous) reactions. However such hold back doesn't promote the mastery of task solution in all age groups.

Analyzing problem solving in preschoolers L. Bozhovich came to the following conclusion. The solution that was not “shaped in words”, not verbalized, did not lead to generalization and the next task was solved by the child as an absolutely new one, even if it was similar to the previous one. By executing the function of generalization, speech enriches the child's experience and thus enhances the further development of the object-related activity itself. It doesn't mean, however, that generalization primordially is formed in speech. The task solution can be obtained in practical activity and only afterwards can be reflected upon and verbalized by the child. L. Bozhovich concluded that the development of thinking “runs ahead” of speech and so does action when overtakes the development of thought. Nevertheless it is speech that provides the possibility for a clear understanding of the task solution and for its liberation from the immediate influence of contextual, external factors.

In an attempt to explain the fact that verbalization of task solution does not always provide action mastery, the transfer of the solution principle to other tasks and generalization, L. Bozhovich discovered that identical or similar utterances that children use in problem solving may differ greatly in their meaning. This supported Vygotsky's statement that “word meanings develop” in the process of children's mastery of the object-related activity and interaction with other people. As children acquire the ways of acting and broaden the area of transfer of the “discovered” task solution principle, the word meaning changes accordingly: it becomes enriched and more adequate to reality. In the process of “word meanings development” the child's capacity to plan his/her activity and to regulate his/her behavior increases.

Almost forty years later, following this study, Lidiya Il'inichna and her co-workers made an attempt to investigate the mechanism of volition behavior in schoolchildren (L.I. Bozhovich, L.S. Slavina, T.V. Yendovitskaya, 1976). One of the mechanisms under study was the child's voluntary intention to act in order to achieve a set goal. It was established that in the process of the formation of voluntary intention the significant role belonged to the so called “internal

intellectual scheme” which represented a complex phenomenon allowing it to “enlarge the motives necessary for goal achievement and provide their prevalence over the initially more “strong” spontaneous motives. The internal intellectual scheme includes “the analysis of the given situation”, possible modes of actions in this situation and registration of their consequences and experiences.

Despite the long time interval between the two studies they have a deep internal link. In the initial study L. Bozhovich demonstrated a complicated interrelation between the object-related action, thinking and speech. In the later one she explored relations between internal experiences and reasoning as based on developed verbal-logical thinking. Both studies are focused on the problem of impulsive and voluntary behavior and both present experimentally captured episodes where “meeting” of affect and intellect takes place.

In her studies dated 1937–1946 Bozhovich turned to the investigation of the process of native language learning as school subject matter.

Regarding the correlation of word semantics and its form in child consciousness she noted that a word is first presented to a child on the side of its object reference which she called a direct meaning of the word. At school under the teacher’s supervision children make an attempt to analyze the word from the point of view of its linguistic qualities. However as the author noted “underestimating the true potential of junior preschoolers the modern pedagogy introduces them mainly to the formal side of word analysis”. As a result the child doesn’t master the ability to capture the “abstract” meaning of the word, that is its underlying generalization.

The next idea expressed by L. Bozhovich was the enclosure of intuitive components (the so called feeling of the language) in preschoolers’ mastery of learning material as closely linked with correlation between semantic and formal elements of the language and child’s mastery and understanding of this correlation. The essence and manifestations of the language feeling were discussed in the last study by L. Bozhovich (1946) devoted to child’s knowledge acquisition as related to their native language. From her point of view the feeling of the language is “... a special type of generalization which doesn’t result from conscious, logic processes (like comparison, matching, reasoning and conclusion)...it is a generalization of vague impressions, connected to experiences rather than to conscious, logic operations of a child (that is why the notion of “feeling”, “flair” of the language is more appropriate here as it signifies in a more accurate and predominantly psychological way the integral emotional character of this generalization)”.

It is not accidental that L. Bozhovich used the term “experience” in her description of the phenomenon of language feeling. This notion was fundamental to all her further scientific career and underpinned her theory of the development of a child’s personality. In the Vygotskian view this term has the notion of a child’s “affective relation” to reality. Even before L. Bozhovich came to the conclusion that the basis of a child’s experience lies in the area of his/her needs she approached the analysis of language feeling not just as a merely empiric generalization but as a crystallization of a child’s experiences accumulated in complex interrelations with the environment.

Thus, the early period of L.Bozhovich’s work was not an episode but an epoch in her scientific biography.

The problem of spontaneous play in context of basic ideas of A.V. Zaporozhets

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Among the works by Alexander Zaporozhets those devoted to play as a leading activity in preschoolers are not many. At the same time they are so profound and precise in depicting the main issues of development and pedagogical support children's play that they are still of current importance today.

A. Zaporozhets especially emphasized the great developmental potential of preschoolers' play which could be put into effect only in the course of play's transformation into "the form of a child's initiative" (p. 239)*. Special training provided by an educator who introduces the new topics and ways of playing in the necessary sequence is not sufficient for the enhancement of play activity; it is necessary to change the methods of its guidance which will make it possible to activate the developmental potential of spontaneous play in children. The idea of a leading role of spontaneous play was expressed in S. Novosyolova's classification in which the leading role belongs not just to any form of socio-dramatic play but namely to its spontaneous form. Here the child doesn't only choose the plot of his/her play but also sets the play tasks, looks for ways of solving them and independently uses the play objects and actions. In such activity the development of spontaneous play is provided by generalization of a variety of child's experiences and its use in play but never by an increased complication of the plots.

A. Zaporozhets emphasized that the leading role in child development belonged to independent play. On one side this idea is generally recognized but on the other side when it comes to mental development of a child the role of independent play "on default" is regarded as limited. A. Zaporozhets demonstrated the leading role of play relating to the mental development of preschoolers. Being guided by investigations of P. Gal'perin he suggested that in the course of play a step by step formation of psychic processes turning from external, material action to mental, imaginary ones took place. The significance of play is connected not only with the process of transformation of material actions into mental, ideal ones (it can be more successfully realized in the course of training), but with the formation of

this mental, ideal plan. It has a great meaning for further development of a person. As A. Zaporozhets figuratively stated: "visual notions of reality and capacity to manipulate them, which are under the formation at this age, constitute the ground floor of an entire building of human thinking. Without the basis like that the construction and functioning of higher intellectual levels that are characterized by complex systems of abstract, logic, sign-mediated operations seem next to impossible" (p. 242–243).

The link between this aspect of preschoolers' play activity and their mental development was investigated by S. Novosyolova. According to her definition preschoolers' play is a specific form of child contemplation about the surroundings. This statement is not given for effect. She showed that the cognitive nucleus of activity (presented by a goal, conditions, means and methods of its achievement) display itself in play in the course of a child's solving the play tasks which s/he sets him/herself or accepts from others (adults and peers as play partners). Play task is defined as a system of conditions that provide an imaginary goal which is intelligible to a child due to his/her life experience and which is aimed at reproduction of reality by play means and methods. Child capacity to solve a play task and its peculiarities can serve one of the most significant characteristics of preschooler's cognitive development and his/her spontaneous play can be used as a method of estimation of development.

To create conditions for a play situation the traditional make-believe play with toys or objects-substitutes was often used in diagnostics. Children also often turn to play in the process of drawing and plot the actions with the characters drawn. This type of make-believe play was called by the author a "a make-believe play with a picture". Why do we treat this activity as a play? First, it displays a play motive (criteria of a play activity according to A. Leont'ev): the child draws a picture not to depict something special but in order to produce some play action which is embodied not only in graphic symbols but also in expressive speech, storytelling, dramatization. Second, in activity like that there

* Footnote Here and on references are made to the monograph by A. V. Zaporozhets "Izbrannye psichologicheskiye trudy Selected psychological works" in 2 volumes, V.1 "Psichicheskoye razvitiye rebyonka -Child psychic development". M., Pedagogika, 1986.— 316 p.

always presents an imaginary situation (criteria of a play by L. Vygotsky).

Thus the make-believe play with a picture is the one in which the play object is created by a child graphically on a sheet of paper in accordance with his/her own wishes, imagination and needs. This type of game was chosen by the author as a foundation for elaboration of a new method of child cognitive development evaluation. The instruction looked as follows. The child was involved in a play situation, but instead of toys s/he was given a sheet of paper with an incomplete picture and a set of pencils. The child could finish and signify the picture in any way it was necessary for the development of the play subject.

The analysis of protocols demonstrated qualitative age differences of children in their approaches to a play task. The problem was to single out the parameters of estimation able to reflect the specificity of child cognitive development. Such parameters were singled out in a course of investigation.

The first parameter was connected with a treatment of a play task as a task in general, i.e. as “a goal in its connection to certain **conditions**) (A. Leont’ev, emphasized by E.T.). A child’s capacity to take them into consideration when composing play events was taken as a criterion of his/her mental specificity. The study demonstrated that in solving a play task a child might take into account the meaning of the conditions of the task (taken separately from the conditions of play and reflecting in the matter of the play something which was missing in play instruction but is in line with the sense of the situation created); might approach the play task in a formal manner (just repeating the text of play instruction but not conveying the specificity of the situation by means of actions); or might not take into consideration the conditions of the task at all. We observed the cases when children fulfilled the task not taking into account even the goal of the play task itself.

The second parameter estimated the structure of play actions as well as their relations to real objects. We could judge not only about the level of a child’s activeness and initiative but also about his/her experience of real and imaginary transformations and their backgrounds just by estimating the quality of child’s play actions (i.e., whether they are uncoordinated or structured, reproductive or creative).

In solving the play tasks some children pointed to some features of blank-pictures and instructions sug-

gested to them and tried to give their comments. This sensitivity to contradictions (or its absence) as one of the significant characteristics of cognitive development was stressed by many researchers. That is why *the third parameter* was connected with interpretation of the object (sign) environment within which the task is solved, explained and added to a consistent integral viewpoint of a child.

The analysis of data obtained in examination with more than two thousand children aged 4–10 years involved made it possible to conclude that this method of cognitive development estimation is valid enough and reliable for examination of preschoolers. The use of make-believe play with a picture as a diagnostic technique allowed researchers to obtain very indicative data regarding the contemporary situation of child development acceleration. The data that we collected demonstrated the difference between the true knowledge adequately used by children in their every day practice and the formal knowledge, memorized but un-apprehended by children. The latter couldn’t be a basis for the further generalizations of a higher level and a foundation for new attainments. It is just what A. Zaporozhets warned about when mentioned spontaneous play as “a ground floor of an entire building of human thinking” (p. 243). The data obtained supports the idea that children’s education should rely upon their real practices and that before their knowledge is generalized in words as symbols it should by all means be generalized in actions (L. Vygotsky). At the same time children are to be given enough time for this knowledge to become firmly established in their spontaneous play, experiments and other kinds of independent activity.

The main function of spontaneous play is in its ability to promote knowledge acquisition in the process of an independently organized play, try this knowledge out and apprehend it truly. This is why the level of child mental development will be determined not by the bulk of his/her knowledge and the capacity to reproduce it in relatively similar situations but through his/her ability to form up his/her activity as based on this knowledge. The high level here is connected not with a direct transfer of the method of activity but with its generalization and its use in different contexts.

The elimination of spontaneous play from kindergarten’s curriculum, its substitution with training and exercises which are sometimes called “didactic games”, do not provide an opportunity for full development of the child during preschool years.

Alexander Vladimirovich Zaporozhetc: life and creative work (from a sensory action to an emotional one)

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The article describes the main periods of life of A.V. Zaporozhetc (1905–1981) including his theatre past as an actor of the Ukrainian theatre named after A.S. Kurbas where he first got interested in psychology, namely to a stage action and stage emotions that later had become the core of his scientific activity.

The first study he conducted during the Kharkov period of his work (1933–1941) Was dedicated to the investigation of children's aesthetic perceptions of literary creations, illustrations to fairytales and theatre performances. Alongside with them he studied the general questions of perception and the contours of his future theory of perceptual actions were also being designed at that time. He also introduced the concept of sensory action at that time. He distinctly framed the statement that the way of acting is a living representation of the object and set a difference between simple and complex actions. In 1941 A. Zaporozhetc published the data obtained in cooperation with V. Asnin concerning the palm skin's sensibility to the rays of visible spectrum. This study was later used by A. Leont'ev in formulating his hypothesis about psyche's emergence. In 1930-s A. Zaporozhetc carried out a number of investigations connected with the development of child's thinking. He coined the term "intellectual action" and described it as a two-act one. Thinking takes place in the first act while the development of its means occurs in the second one.

During the Second World War he worked in the rehabilitation hospital where he examined soldiers with wounded thoracic limbs and focused on investigation of voluntary movements and acts. At that very period he fell under the influence of N. Bernstein's ideas. According to N. Bernstein the movement is reactive in nature. A. Zaporozhetc added the notion of "perceptibility" to this feature. In the middle of 50-s in the study by M. Lisina carried out within the framework of this idea and under his supervision it was proved that perceptibility of a movement is an indispensable condition of its controllability. Only after the subjects learnt to sense their vascular reactions they could control them.

Then A.V. Zaporozhetc has addressed to the problem of "an internal picture", or the internal form of movement which contents include an image of a situation and those actions which in this situation should or can be executed. He has included an image of a situation and an image of an action, i.e. a kind of perceptive substance in a biodynamic substance of movement. In the process of his researches of movements and actions they were filled

with cognitive properties and functions. It, eventually, allowed him to conclude that action is clever by itself and not because it is supervised by the external or internal intellect. From the problem of subjectivity of actions A.V. Zaporozhetc turned to the problem of personal attitudes and sets, to the problem of "a motor activity and personality" (the discussion of which became the final part of his book "Development of voluntary movements" (M.: Izdatel'stvo APS of RSFSR, 1960). Through the whole book he carried the idea that it was necessary to turn down the understanding of alive movement as a mechanical spatial transposition of a body but turn to its consideration as the complex motor act realizing a certain (and integral) relation of the individual to the object, to the reality, to other people. Not less important is the idea that the process of new actions mastering (instead of object mastering by means of actions and activities) represents original enrichment of the subject, the development of not only his/her operational techniques, but also of his/her personality, truly human being. In essence, this book should be treated as the contribution to the decision of eternal problems of psychology: freedom of will and free action.

When studying emotional sphere A.V. Zaporozhetc was guided by L.S. Vygotsky's statement that the essence and sources of an origin of the most deep and intimate in the person consisted in his external sensual – object related activity, his interrelations with other people, in the products of culture created by the society including works of art, treasures of art.

In his study of emotions A.V. Zaporozhetc has applied the central for the cultural – historical psychology principles to exteriorization and mediation. Specifically human emotions are mediated with social measures, standards of value. In childhood communicating with people around the child acquires corresponding norms and standards. Analyzing emotions he used the same logics as in the analysis of perception where he spoke about the mastering of socially framed sensory standards becoming the operational units of perception. No doubt that exteriorization is an initially social process implicitly including such forms of activity as joint action, communicative activity (obshcheniye), joint- shared activity and so forth.

Having turned to the problem of emotions, A.V. Zaporozhetc voluntarily or not started to fall outside the limits of cultural – historical psychology, understanding that it is not omnipotent. With all his

reticence he felt the pressure of natural impulses and passions. He had a feeling that the human nature will bring into life its mysterious surprises to the cultural – historic psychology. That was the source of his interest to degrees of freedom of human motility and intelligence, understanding of the necessity to master them as well as to liberate them from tool stamps; his attention to internal system of thoughts and experiences of a person; his interest to a voluntary and free action; to the spontaneity of development without replacing it with training and shaping as limiting the one. This is the reason of his protests against simplified and naive finite treatments of child development and the expressed care for its amplification. At last, this is the source of his constant and unsatisfied interest to the affective sphere of the person in general.

A.V. Zaporozhetc agreed with L.S. Vygotsky who regarded emotions as the internal psychological mechanism of interrelations between thinking and sensual – object-related activity of the individual who is not a passive contemplator of the reality, but the one who reacts

at it with partiality. The “between” he mentioned is a something which can get power both above thinking, and above activity. From this point of view “emotional experience” is not a glimpse of the individual’s states, but is a something that was perceived and cognized by the individual and also lived through and experienced. It is an individual’s vital experience of successes and failures, victories and defeats, which a person is attaining as a personality, while joining multiform relations with the object-related world and the surroundings.

Based on his researches and probably his own life experience A.V. Zaporozhetc has concluded, that “Feelings are a nucleus of the person, an organ of his individuality”. A nucleus of his own personality was undoubtedly his feelings well disguised behind his external quiet coolness. Such conclusion does not belittle his mind and will. His feelings were really the supreme ones, they were clever and effective. He understood the absolute value of human feelings and tried to remove them behind the limits of behavior and activity pragmatism.

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