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A CONCEPTION OF CREATIVITY TYPOLOGY: METHODOLOGICAL APPROACH

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Abstract

The original approach to building up a creativity typology is described. The Creative Field method allows defining stimulus-productive, creative and heuristic types of creativity. The conditions of carrying out the experiment using this method are described.
Further the results of the research aimed at defining creativity types of young specialists working in the sphere of high tech industrial production are presented. The correlations between the creativity type and motivational profiles are shown.

Keywords: *Creativity, Typology, Analysis Unit, The Creative Field Method, Motivational Profile.*

1. Introduction

The concept of creativity is one of scientific paradoxes. It still has not received a whole clarification in the scientific literature. That is why genial discoveries advancing contemporary science for ages and a solving a new problem by a schoolboy are still considered in the same plane. To creativity belongs building up a scientific theory along with solving a puzzle. Experimental research of creativity leaving the concept of cognition as reproductive process within the framework of associationism and reaching its understanding as productivity in gestalt-psychology could not move further. An insight providing solving problem situations could appeal to intellect only. Such methodological approach made intellect equal with creativity. That led to the situation when creative abilities were diagnosed using tests with a set of tasks, actualizing intellectual operations. The tendency was strengthened by the requirements of psychometric paradigm, which Stern defined with maximum clearance: "The need of measurement leads to narrowing of a concept" (Stern, 1997). Thus, understanding the concept of creativity was based on a technique of measuring certain elements. This fact underlined the tendency which Vygotsky named "element-wise analysis", underlining that "on the way of identification of the whole with an element, a problem is not solved, it is just passed over" (Vygotsky, 1982, p. 13).

A crucial factor that defined the direction of research of creativity was Vygotsky's methodological directive on two ways of scientific development: the direct way of complication of a structure and its functions and the opposite way coming out of a theoretical definition of a higher form. The direct way comes to describing a psychic phenomenon, basing on concrete empirically established by any possible way characteristics. Due to the absence of exact criteria for the highest form all the forms can be considered as having equal significance. We can see it nowadays when we accept that there is a variety of concepts of giftedness and creativity. To such concepts belong: the insight (Wertheimer, 1945), the divergent thinking (Guilford, 1959), association by similarity (James, 1950). The modern researcher Kudriavtsev (2015) uses the concept of "potentiation" (Schelling's term) as a growth of child's abilities.

The opposite way is based on a theoretical definition of a higher form reflecting the essence of the under study phenomenon. However, the analysis of the highest form is important for identifying the simplest form, which according to Aristotle reflects the essence of analysis (analysis unit). In his appeal to psychology willing to study complex phenomena Vygotsky proposes to change methods of resolution to methods of analysis that isolates units. Such approach, in his opinion, provides finally the way of understanding of creativity nature not by its product, but by its mechanism. Galton has come closer to the point than the others as he mentions devotion to a cause as a characteristic feature of gifted persons (Ilyin, 2009).

The objective of studying the action losing a form of response demands designing a new model of experiment, opposite to the methods built by the "stimulus-reaction" principle, "a challenge by our self-will" (Chelpanov, 1999).

Only on the way of realization of Vygotsky's methodological principles it became possible to define the mechanism of creation of new forms. It is on the way of defining and theoretical justifying the highest form of creativity where we consider creativity phenomena, losing the form of response. These are "porism" (a term introduced by ancient Greeks) as an unforeseen going out into "not-specified" and types of discoveries described by Claparède (2007) and by Hadamard (1945). Those are discoveries that are not connected with solving of given tasks, but unexpected discovery of a new fact. For studying this kind of creativity a new type of experimental model had to be built up. In its turn, this new model allowed us to introduce a new psycho-diagnostics method for convenience called The Creative Field. An experiment using this method allowed identifying the creativity analysis unit, which is the ability of a person to develop the performed activity by one's initiative. Basing on this creativity analysis unit first creativity typology was built up, i.e. the differentiation of the whole heterogeneous phenomenology of creativity was carried out (Bogoyavlenskaya, 2009).

2. The Creative Field Method and Creativity Typology

The estimation of personal potential within a certain time period requires space for following train of thought outside the limitations of solution of the initial problem. A new experimental model should be represented by the activity which is variable, but in a different way comparing with tests including a set of various tasks. It has to be homogeneous and to have differences at the same time. The system of problems of the same type meets these requirements. They are solved the same way, but differ by a certain parameter. Thus, we can watch the process of mastering an activity and at the first stage estimate mental abilities of a testee by characteristics of one's educability and all its indexes (rate of advancing, level of generality, consciousness, independence). In our opinion, that allows overcoming imperfection of testing, defining intellect more completely and more precisely.

The next stage of the experiment allows following the process after mastering activity and identifying the phenomenon of creativity itself as the going out the limitations of given situation. Since the system of single-type problems has a range of common patterns, it provides building up a two-layer model of activity. The first, surface layer is the given activity consisting of solving of certain problems. The second, subsurface layer (masked by the first layer and not obvious for a testee) is the activity of defining hidden patterns, included into system of problems. The discovering of those is not needed for direct problem solving, thus, the space for observing the activity development process is created.

The Creative Field method supposes compliance with three principles: (1) absence of outer and inner evaluative stimuli; (2) absence of limitations restricting the activity in whole and (3) the experiment should be repeatable.

The realization of this technique is possible only on the assumption of fulfilment of the principles in their unity as well as by individual testing, whereas by group (mass) testing as Chelpanov stated in the beginning of the last century "the individuality of each testee is lost, originality of mental process running in his mind is concealed. Facts to be essential for conclusions are wasted" (Chelpanov, 1999, p.368).

The technique of the Creative Field allows marking out various levels of performance and differentiating the whole complex and heterogeneous phenomenology of creativity. This concept provides designing of typology of creativity according to cognition levels.

The activities stimulated by outer factors (including high level of performance) belong to the first type called "**stimulus-productive".** The cognition process of this level focuses on the certain situation and is performed on the level of single, according to the philosophical classification. The major part of mankind belongs to this type.

The activity that is developed by the person's initiative belongs to the second type – **heuristic**. This is the level of art and laws discovering, which was referred by Rubinstein (1935) as "explosion of layers of things in existence". This is the cognitive process on the level of special. It is **gift** that is characterized that way in the philosophic literature.

The last level – the **creative** one – is characterized not only by discovering new patterns, but by their theoretical proving as well. It is the level of building up theories and defining new problems. The cognitive process is performed on the level of the whole. Such process provides cognition of the essence of an object. Furthermore, having known the essence of a phenomenon, one can predict qualitative leaps in its development and this characterizes the prognostic abilities of a subject. According to philosophers, it is this ability that more than anything defines a genius who predicts future on hundreds of years ahead.

Thus, high indexes on the first (stimulus-productive) level prove just high intellectual abilities of a subject. Last two levels (heuristic and creative) identify creative abilities, i.e. depth of cognition. The necessity of marking two levels explains using the term "creative", which in this context is an alternative of understanding of creativity as divergent productivity.

Alongside with that the ability to develop activity by one's initiative can be explained just by the characteristics of intellect. It is a quality of integrated personality, reflecting the interaction of cognitive and emotional spheres in their unity, where abstraction of one of the sides is impossible as they are inseparable. That alloy of capabilities and personality possesses a quality of generality, i.e. belongs to the whole as to the unity and corresponds to the methodological requirements to the analysis unit of the creativity.

The validity of the Creative Field method is proved in several cycles of research supervised by Diana B. Bogoyavlenskaya using relevant techniques oriented to various age ranges (Bogoyavlenskaya & Bogoyavlenskaya, 2013). In the same time an issue of the characteristics of motivational sphere of adults belonging to various creativity types (defined by the Creative Field technique) remains little-studied.

3. Research Aim, Objectives and Design

The aim of the current research is studying motivational characteristics reflecting main personality orientations (consuming and productive) in groups, defined by the Creative Field method.

For reaching this aim the following objectives are settled: (1) marking out the typological groups by the Creative Field method; (2) defining the typology of motivational structure in each group.

The Creative Field method is described above.

For studying motivational structure the Milman's technique the Diagnostics of Personal Motivational Structure (further on - DPMS) is used (Milman, 2005). According to the author's conception the motivational scales reflect the main personal orientations – consuming and productive.

The DPMS technique includes seven motivational scales, reflecting: whole-life motivation (concerning the whole sphere of life activity); working (learning) motivation; "ideal" state of the motive understood by the author as "a level of a drive to act"; real state – the degree of satisfaction of a certain motive at present as well as efforts applied for reaching satisfaction of this motive.

The whole personal motivational picture is reflected in a personal motivational profile representing in quantitative or graphical form the correlations between various motivational scales registered by a psycho-diagnostic method. A character of motivational profile (MP) can be defined according to the profiles typology. After defining the characteristics of motivational sphere of each testee, his/her motivational profile can be attributed to one of the following types: progressive, regressive, expressive, impulsive, flat or combined.

The research was carried out in 2016. The research sample consisted of young specialists of an industrial enterprise (N=41, age between 23 and 30 years), oriented at high results of the production activity and carrier growth.

The obtained data were processed by mathematics and statistics methods; the comparative analysis was applied.

4. Research Results

Let us consider the results obtained by using of the Creative Field method.

According to the results obtained by using this method three groups of participants are defined, corresponding to three creativity types: the group of the stimulus-productive type (SP), the group of the heuristic type (H) and the group of the creative type (C).

The following distribution according to the creativity type is obtained: stimulus-productive type – 68.2% (the SP-group), heuristic type – 14.6 % (the H- group), creative – 7.3% (the Cr-group). A part of the participants (9.9 %) could not follow the whole course of the research.

The next objective of the research is defining motivational profile type in the groups of stimulus-productive, heuristic and creative type. At first, the motivational profile type of every participant is defined, and then the distribution (percentage) of motivational profiles in each group is described.

In the SP-group (the stimulus-productive creativity type) the following distribution of motivational profiles types is found out: progressive – 12.3 %, regressive – 9.7 %, expressive – 61.0 %, impulsive – 7.3 %, flat – 0 %, progressive-expressive (combined) – 9.7%, progressive-impulsive – 0 %, regressive-impulsive – 0 %, and regressive-expressive – 0 %. The expressive type dominates in this group which is related to self-affirmation in the society, developed ambition, eccentricity, constant rising of aspiration level.

In the H-group (the heuristic creativity type) the following distribution of motivational profiles types is found out: progressive – 53.6 %, regressive – 7.3 %, expressive – 12.1 %, impulsive – 4.8 %, flat – 0 %, progressive-expressive – 12.6%, progressive-impulsive – 4.8 %, regressive-impulsive – 4.8 %, and regressive-expressive – 0 %. In accordance with Milman's ideas, this type of profile positively correlates "with successful working activity. Most often this type of the MP is met among creative people. At the same time, this kind of profile is typical for a socially-oriented person and that fact can be included into a concept of creative and productive orientation of a person" (Milman, 2005, p. 42).

In the Cr-group (the creative type) which includes only two participants a single type of motivational profile dominates – the progressive-expressive one.

5. Conclusion

The obtained results proved the validity of the Creative Field method, which allows defining three creativity levels: stimulus-productive, heuristic and creative.

In the course of the research in the sample consisting of young engineers, working in the sphere of industrial production, stable correlations between creativity types and characteristics of motivational orientation are found out. It is shown that the specialists with the creative and heuristic types have pronounced productive motivation, aimed at development of the activity by one's initiative and that defines its creative character.

In the group of stimulus-productive type the expressive type of motivational profile dominates, which corresponds to the tendency of self-affirmation in the society.

The defined patterns are used in routine of the human resource management for solving tasks of forming personnel reserve for providing activity of an enterprise at the stage of its decommissioning.

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