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**METHODOLOGICAL POTENTIAL
 OF THE COGNITIVE MODEL
 OF THE PERSON'S SPIRITUAL BEING PYRAMID**

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A. Kalyta, O. Klymenyuk. Methodological potential of the cognitive model of the person's spiritual being pyramid. In this paper the authors, on the basis of a systemic approach, analyze the methodological potential of a cognitive model representing the pyramid of the person's spiritual being. This article focuses on the main requirements for modeling cognitive processes on the plane of the individual's spiritual being differentiated into existential, mental, transcendental spheres, and consciousness. Research results emphasize that, in the existential sphere of the individual's spiritual being, cognitive processes are based on his/her emotional (unconscious) thinking. The mental sphere, which together with the transcendental one forms a sub-conscious psychic level, is characterized by emotional type of thinking. In the transcendental sphere, the acts of cognition are realized by means of rational thinking, while the consciousness controls the results of cognitive processes' self-development solely on a logical basis. By synthesizing the ideas of modern most productive systemic and synergetic methods, the authors substantiate the use of a systemic approach to the formation of a universal synergetic model of the self-development of speaking-and-thinking and thinking-and-acting processes in the person's spiritual sphere. The paper also proves practically unlimited methodological potential of the cognitive universal model of the pyramid of the individual's spiritual being; and draws up a methodological perspective of its wider application not only in the field of linguistic, psychological and social studies, but also in historical, economic, political and other areas of knowledge that deal with the individual's speaking-and-thinking and thinking-and-acting activities in the processes of person's communicative, intellectual and transformative behavior.

Key words: cognitive processes, methodology, modeling, speaking-and-thinking and thinking-and-acting activities, spheres of an individual's spiritual being.

А.А. Калита. О.В. Клименюк. Методологічний потенціал когнітивної моделі піраміди духовного буття людини. У роботі на основі системного підходу проаналізовано методологічний потенціал когнітивної моделі піраміди духовного буття людини. У статті викладено основні положення, правила і вимоги, що висуваються до моделювання когнітивних процесів на площині духовного буття індивіда з його диференціацією на сфери екзистенції, ментальності, трансцендентності і свідомості. Результати дослідження свідчать, що перебіг когнітивних процесів в екзистенціальній сфері духовного буття людини базується на його емоційному (позасвідомому) мисленні, ментальна сфера, яка утворює у взаємодії з трансцендентною сферою психічний рівень підсвідомого, характеризується емо-раціональним типом мислення, у трансцендентній сфері акти когніції реалізуються за допомогою раціонального мислення, а свідомість контролює результати саморозвитку когнітивних процесів винятково на логічній основі. Шляхом синтезу ідей сучасних найпродуктивніших системного і синергетичного методів обґрунтовано використання системного підходу до побудови універсальної синергетичної моделі саморозвитку процесів мислення під час породження мовлення й мисленнєвого проектування дій у духовній сфері людини. У статті доведено практично необмежений методологічний потенціал когнітивної універсальної моделі піраміди

духовного буття індивіда; запропоновано методологічну перспективу більш широкого використання піраміди духовного буття людини не лише у сфері лінгвістичних, психологічних і соціальних наук, але також і в історичній, економічній, політичній та інших галузях знання, пов'язаних із мисленням індивіда під час породження мовлення і мисленнєвого проектування дій у процесах його комунікативної, інтелектуальної та перетворювальної діяльності.

Ключові слова: когнітивні процеси, методологія, мислення під час породження мовлення і мисленнєвого проектування дій, моделювання, сфери духовного буття індивіда.

А.А. Калита, А.В. Клименюк. Методологический потенциал когнитивной модели пирамиды духовного бытия человека. В работе на основе системного подхода проанализирован методологический потенциал когнитивной модели пирамиды духовного бытия человека. В статье изложены основные положения, правила и требования, предъявляемые к моделированию когнитивных процессов на плоскости духовного бытия индивида с его дифференциацией на сферы экзистенции, ментальности, трансцендентности и сознания. Результаты исследования свидетельствуют, что протекание когнитивных процессов в экзистенциальной сфере духовного бытия индивида основано на его эмоциональном (бессознательном) мышлении, ментальная сфера, образующая во взаимодействии с трансцендентной психической уровень предсознательного, характеризуется эмо-рациональным мышлением, в трансцендентной сфере акты когниции реализуются посредством рационального мышления, а сознание контролирует результаты саморазвития когнитивных процессов исключительно на логической основе. Путем синтеза идей современных наиболее продуктивных системного и синергетического методов обосновано использование системного подхода к построению универсальной синергетической модели саморазвития процессов речемышления и мыследействия в духовной сфере человека. В статье также доказан практически неограниченный методологический потенциал когнитивной универсальной модели пирамиды духовного бытия индивида; предложена методологическая перспектива более широкого использования пирамиды духовного бытия человека не только в области лингвистических, психологических и социальных наук, а также в исторической, экономической, политической и других областях знания, связанных с речемышлением и мыследействием индивида в процессах его коммуникативной, интеллектуальной и преобразовательной деятельности.

Ключевые слова: когнитивные процессы, методология, моделирование, речемышление и мыследействие, сферы духовного бытия индивида.

1. Introduction

Everything that modern science can embrace and fix within the knowledge of a unique phenomenon of the person's spiritual being can conventionally be subdivided into two main processes: speaking-and-thinking and thinking-and-acting activities. Such division is an objective necessity, since these processes, occurring in the individual's psychic sphere, are generally simultaneous and are characterized by a complex energetic interconnection of the engaged logical and emotional beginnings of the human's thinking.

The global nature of the supervenience principle, known to the researchers of multifactor phenomena, states, that in the real world the reasons of all without exception processes are due to certain complexes of factors that lead, in their turn, to rather a specific set of consequences. Therefore, the deeper the researchers of a cognitive sphere come to realize and experimentally prove the objectivity of this principle, the stronger they feel the need to support the platform of monistic dualism in scientific comprehension of the person's spiritual being phenomenon.

In view of the above-mentioned circumstance, it becomes clear that from a methodological point of view it is rational to dually subdivide the processes of spiritual being into speaking-and-thinking and thinking-and-acting activities, ignoring at the same time the existence of the third class of processes that can be termed as complex processes of thinking-and-verbal activities. This is the logic of a scientific analysis and we cannot bypass it in the considered case.

The monistic nature of this study should be seen, in the first place, in the functional universality of the neuron and in the mechanism of the individual's speaking-and-thinking as well as thinking-and-acting processes. Researchers are well aware that in the material substance of the

human nervous system the functions of the neuron are pervasive and extensive: it participates in the perception of signals of various physical nature, ensures the flow of all without exception acts of logical and emotional thinking, in the processes of decoding, recognition, processing and storing of incoming information, as well as in controlling the person's speaking-and-thinking and thinking-and-acting activities.

In its turn, regardless of the difference in the nature of the material and spiritual, occurring in the human's psychic sphere, the mechanism of self-development of all the processes is common and is realized by the psycho-physiological energy of emotions genetically accumulated by the organism and released exclusively under the influence of instincts.

It is quite obvious that a monistic dualism as the most general methodological instrument can serve as a guarantee of creating the adequate theory and obtaining reliable experimental facts while studying the processes of the individual's spiritual being.

However, one cannot avoid other important circumstances either. They are connected, firstly, with the results of any study of cognitive processes, whose self-developing nature is described by stochastic theory. The results obtained are probabilistic and, consequently, must have statistical adequacy.

Secondly, the very interdisciplinary essence of the cognitive research requires from the sought-for model a certain degree of its universality as well as possibilities of universalization of the conceptual terminological apparatus of its graphic image verbal description.

While choosing the model of the person's spiritual being pyramid as an object of the theoretical and methodological research, it is also necessary to foresee the sphere and boundaries of its possible application.

Turning to this problem, we shall remind that under conditions that do not exceed the mentally traditional norms, the speech behavior of a particular person can be predicted with a high degree of certainty. Such a prediction is possible since the speech behavior depends on the level of its cultivation (education) as a result of acquiring behavioral skills (called habits) as an automated reaction to stimuli or punishment. While making this kind of prediction the scholars proceed, as a rule, from the fact that the energy of person's speaking-and-thinking and thinking-and-acting activities is genetically intrinsic to a human being. Similarly, the individual's will, controlling cognitive processes' results not to exceed the norm that violates the freedom of people around us, is also genetically determined. At the same time, it is assumed a priori that each specific behavioral norm is, in its turn, generated in the processes of the individual's continuous socialization and is predominantly viewed as a result of fixing in his/her memory the corresponding mentally conditioned concepts-prototypes of behavior (speaking-and-thinking and thinking-and-acting) in standard (ritual) or typical (traditional) conditions of communication in its broadest sense. Consequently, under certain conditions, the formation of a reliable short-term forecast of the results of the individual's speaking-and-thinking and thinking-and-acting activities in terms of his/her behavioral skills and habits is quite possible, given that it is the conditions and skills, as life experience shows, that lead to the person's will determinism.

The same cannot be mentioned in the case of making a long-term forecast of a person's behavior (speaking-and-thinking and thinking-and-acting activities). The limited possibility of a satisfactory long-term prediction is connected, on the one hand, with the freedom of the individual's will. On the other hand, it is connected with the fact that the researcher cannot foresee non-standard situations of self-developing cognitive processes of speaking-and-thinking and thinking-and-acting activities, in which the energetic potential of one of the parameters of state will be so energetically powerful that, suppressing the potential of the parameter of order, will change the attractor-structure development patterns and will lead the functioning of the analyzed system to an unexpected or paradoxical result.

It is a tendency to view external and internal disturbing effects as the factors that can drastically change the course of cognitive systems' self-development (the functioning aim), and,

consequently, will change the parameters of their state. The external factors that affect speaking-and-thinking and thinking-and-acting activities can comprise humiliation, insult, and any other circumstances causing discomfort or threat to the individual's freedom. The role of internal disturbing factors is most often performed by children's, mental, social and other complexes, as well as acute emotional states and conditions of an individual's organism.

It should be emphasized that, unlike prognosticating, the analysis of cognitive processes of individual's speaking-and-thinking and thinking-and-acting activities is solely based on the retrospective logic, since within such an analysis the scholar studies the objects whose self-development is complete, and its results have become an actual reality, information about which is fixed on video and audio carriers.

From the information stated above as well as from the results of a preliminary conducted analysis, it is apparent that, having a significant amount of conceptual and theoretical works in linguistics [Boldyrev 2016; Karasik 2014; Lakoff 2004; Pinker 2004; Pryhod'ko 2008; Croft & Cruse 2004; Evans 2006; Fauconnier & Turner 2002; Minsky 1975; Shevchenko 2005; Turner 1991] and a well-formed conceptual terminological apparatus, in the field of cognitive studies there appears an urgent necessity to choose an adequate model and to deepen the development of the universal methodology for modeling cognitive processes occurring in the sphere of the person's spiritual being.

Therefore, the **aim** of the undertaken theoretical study is to increase the effectiveness of the interdisciplinary cognitive phenomena research by choosing a model and developing on its basis a universal methodology for modeling the processes of speaking-and-thinking and thinking-and-acting activities that occur in the sphere of the individual's spiritual being.

2. Structural and logical elements of modeling

Among the significant number of models proposed and actually used by the specialists in cognitive field, for the study of definite aspects of speaking-and-thinking and thinking-and-acting activities, we substantiated our choice of the model representing the pyramid of an individual's spiritual being, advanced by A.V. Klymenyuk [2010: 208–213], as the one that most fully satisfies all the above-mentioned requirements. Its conceptual graphic interpretation is presented in Fig. 1.

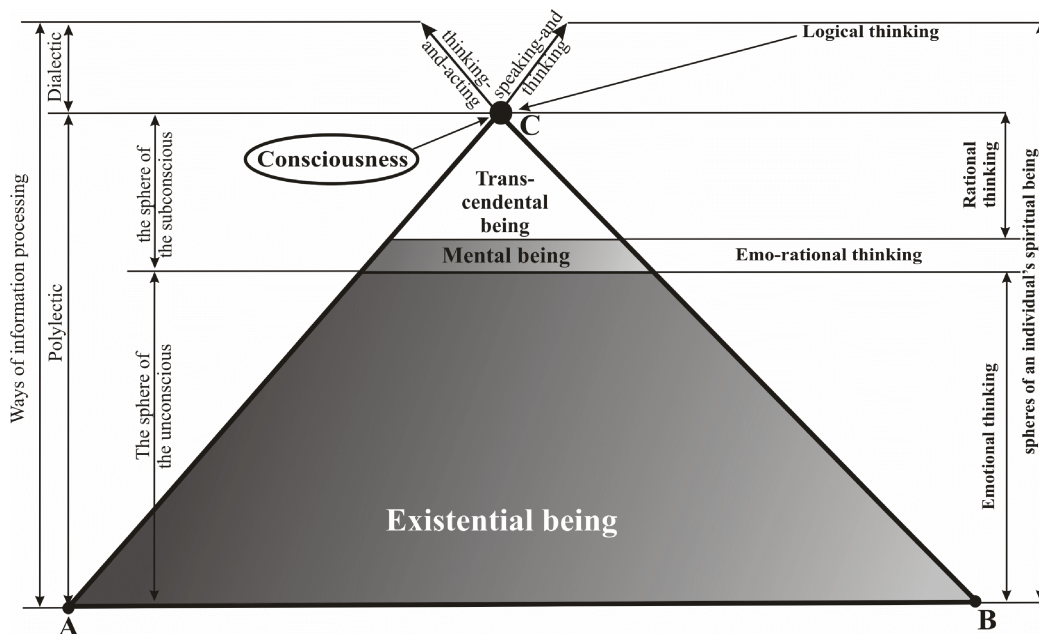


Fig. 1. The pyramid of the spheres of the individual's spiritual being

Commenting the model, let us, first of all, pay attention to the fact that in communication or any joint activities, the processes of the person's spiritual being emerge in his/her existential sphere and, rising through the mental and transcendental spheres, are completed under the control of consciousness by means of certain verbal or physical actions.

The notions of *existence* and *existential* are defined in the paper as everything that relates to the remarkable uniqueness of the intrinsic human's inner being, the individual's feeling of being involved into something higher, and which cannot be expressed in the language of notions [Klymenyuk 2010: 207]. In this case, the person's existential being proceeds in his/her unconscious sphere and is based on the emotional type of thinking, the person's psycho-physiological energy being its driving force [ibid.: 209].

The notion of *mental* implies, in its turn, the result of the interaction of deep levels of collective and individual consciousness, determining the way of human's thoughts and feelings, based on unconscious thinking guidelines, as well as on his/her skills of emotional and behavioral readiness for the perception and cognition of the surrounding world [ibid.: 207]. The individual's mental being proceeds in his/her sub-conscious sphere and is grounded on the emotional type of thinking, whose driving force is the psycho-physiological energy of his/her personality [ibid.: 209].

Similarly, the notion of *transcendental* is defined as the act or process as well as any product of human thinking about the super-categorical completeness of his/her being or about its individual characteristics, that are considered inaccessible to direct cognition and can be perceived only in speculative terms, though can be expressed in abstract concepts [ibid.: 207]. Here, it is necessary to clarify that the person's transcendental being proceeding in his/her sub-conscious sphere is based on the rational type of thinking, whose motivating force is the psycho-physiological energy of his/her personality [ibid.: 211].

Let us underline three important circumstances for the further analysis. Firstly, according to the traditional scientific ideas [Frejd 1990: 425–433, 440; Jung 1998: 23–51, 161–166], the existential sphere is, in its essence, the sphere of unconscious, while mentality and transcendental form the sphere of sub-consciousness.

The second circumstance that requires special attention is that the consciousness itself (point C) does not produce the results of cognition. It performs a controlling function, comprising two main subfunctions: taboos the cognitive processes' results, or else ensuring their logical embodiment in the forms of conscious speaking-and-thinking and thinking-and-acting activities.

It is also important to understand the fundamental specificity of the methodology of cognitive processes' analysis, based on axioms, due to which, unlike the consciousness, that processes the information in a dialectical way, the person's unconscious and sub-conscious spheres handle the information following the polylectic laws [Klymenyuk 2010: 147–167].

3. Systemic analysis of the universal synergetic model

In order to reveal the methodological potential of the model (see Fig. 1), let us show that the object sphere of studies carried out with its help can include any set of scientifically studied cognitive processes or systems. We have to remind that, according to N. Wiener's definition, the system is a set of structurally and functionally interdependent elements [Wiener 1968: 201]. Traditionally, any system viewed as an abstract model is usually depicted as a "black box". In our case, the sphere of the person's spiritual existence which is psycho-physiological in its essence is a typical complex stochastic open non-equilibrium system capable of exchanging energy and information with the environment through its shell that separates it from the mentioned environment. The non-equilibrium of this system consists in the nonlinear nature of the cognitive processes developing within it. As a result of its stochasticity, as it was pointed out above, is the uncertainty of the individual's behavior and its difficult predictability on long intervals of time.

Let us further consider the graphical representation of the system in the form of a "black box" (Fig. 2), tested in the following papers [Kalyta & Valigura 2010; Kalyta & Taranenko 2011; Kalyta

&Taranenko 2012; Kalyta & Marchenko 2013; Taranenko & Sokirskaja 2013; Kalyta 2016: 43, 63–66; Humeniuk 2018; Taranenko & Kutsenko 2018].

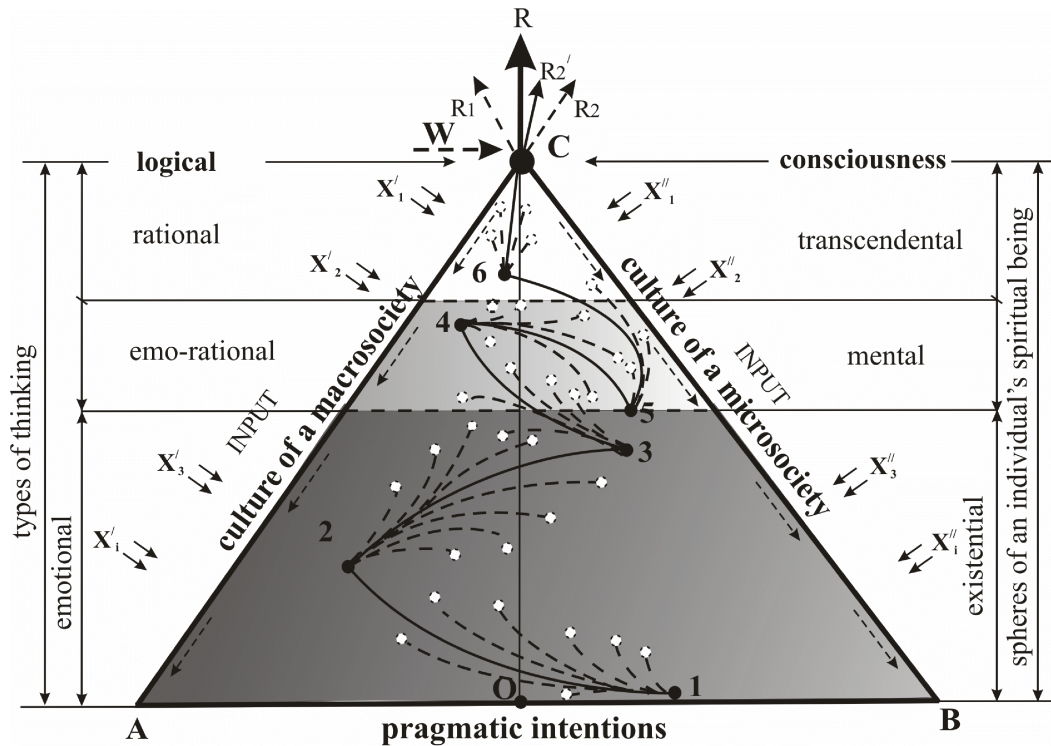


Fig. 2. Universal system model of the self-developing processes of speaking-and-thinking and thinking-and-acting in the individual's spiritual sphere

The figure presents a complex four-leveled conventionally topological model of the spheres of the person's spiritual being, including the existential, mental and transcendental spheres as its subsystems, whose functioning is controlled and partly guided by the consciousness marked on the model by the point **C**. The system shell is formed by three components: the cultures of macro- and microsocieties (**AC** and **CB**, respectively) and pragmatic intentions of the individual (**AB**).

Functional possibilities and practical examples of the model application are comprehensively outlined in the work [Kalyta & Taranenko 2011: 213–219]. To reveal its methodological potential, we are to reproduce (see Fig. 2) the following information mentioned in this paper.

Verbal and visual information (**W**) enters the recipient's consciousness and, being processed, transforms into certain signal-requests directed to all the spheres of his / her spiritual being (see arrows parallel to the sides of the triangle).

Simultaneously with the verbal and visual information (**W**) perceptual signals of a different physical nature, marked as the inputs of the system (**X**), enter consciousness, sub-consciousness (mental and transcendental spheres) and the recipient's unconscious existential sphere. Since the cultures of micro- and macro-societies as well as pragmatic intentions serve in our model as the parameters of order, having a major impact on the course of cognitive processes, the inputs (**X**) being directly related to them are divided into the controlling and interfering effects by means of which the indicated influence is realized. Thus, within the culture of macro-society we can classify, for instance, the controlling effects as the $X_1^/$ – the interlocutor's speech behavior, $X_2^/$ – his / her social status, etc., while the interfering effects may comprise the following: $X_3^/$ – vis-à-vis rudeness; $X_4^/$ – presence or absence of the third parties, etc. Similarly, the micro-society culture as a parameter of order serving as the controlling effects can comprise: $X_{1}^{//}$ – individual's self-identification in the context of the ongoing communication, $X_{2}^{//}$ – readiness or unreadiness for

understanding vis-à-vis, etc., the inferring effect can include: X''_3 – the acquired by the individual the taboo of ethical norms of conduct, X''_4 – spiritual guidelines, worsening the disease state of a particular organ in the individual's organism, etc.

As a result of receiving the indicated information and corresponding perceptual signals, there occurs the excitement of a psycho-physiological energy of the individual's unconscious (the existential sphere), leading to the launch (see point **1**) of a certain cognitive process in the sphere of his/her spiritual being. In this case, at the point **1** of the individual's existential being (the point of the first bifurcation) a specific cognitive synergetic chaos is inevitably generated on the basis of the energy of instinctive emotional reactions.

At this point, at the first stage of chaos, the energy of not clear pragmatic intention, being in resonance with the speaker's emotional energy, forms a definite emotional-and-pragmatic potential of the further self-development of cognitive processes. The second stage, which represents the way a complex psycho-energetic system of an individual enters chaos, triggers the process of searching for the attractor structure characterizing a self-developing cognitive process of thinking-and-speaking and thinking-and-acting activities.

Deep in this chaos there simultaneously originate a partial attractor (**1-2**) of the cognitive processes' self-development, and all the subsequent structure of the attractor (**1-C**), which reflects the aim of the system. A partial attractor (**1-2**) in the sphere of the individual's existential being is represented by the most powerful attractor able to take into the scope of its attraction the near-by located alternative attractors, whose ends are marked by the light points on the model, and suppress the remaining energetically less powerful attractors. Due to this, the first stage of the self-development of considered cognitive processes, moving along the trajectory **1-2**, completes at the next bifurcation point (see point **2**).

The first partial attractor **1-2** ends at the point **2**, located in the zone of the macro-society culture influence. This fact indicates the overwhelming impact of controlling effects of the macro-society culture on the trajectory of the self-development of the analyzed cognitive process in the existential sphere of the individual's spiritual being. A more detailed retrospective description of the reasons and factors influencing the actualization of this partial attractor is traditionally called the study of the cognitive system behavior on a small (near) scale. The analysis of the remaining stages (**2-3**, **3-4**, **4-5**, **5-6** and **6-C**) of the cognitive process, described by the **1-C** attractor structure, is performed similarly. The analysis of the entire trajectory of the self-developing process (the attractor structure **1-C**) is termed as a full scale system's consideration.

The self-development of the system at the third point of bifurcation (point **3**), described by the partial attractor **3-4**, starts in the existential sphere of the individual's emotional type of thinking and ends in the mental sphere, characterized by its emo-rational type of thinking.

It's quite natural therefore, that under the influence of the energy produced by the rational elements of thinking, a partial attractor (**3-4**) originated in the chaos of the third point of bifurcation, as if compensating the predominance of emotions, deviates towards the norms of macro-society culture. Here, in the mental sphere, the contradictions, being a motive force of chaos, develop between the cultures of micro-society that is characterized by communication skills acquired within the family and the nearest social and ethnic group of people, and the culture of macrosocial behavior. The attractor completes the next stage of its development at the point **4** which indicates that the prototype concept has been activated in the individual's psychic sphere, stored in his/her memory as a result of previous cultural upbringing (socialization). This prototype concept serves as a typical algorithm of macro-social behavior in similar situations.

However, and this is evident from the trajectory of the attractor **4-5**, at the point **4** of the next bifurcation, the state of the individual's psyche comes into the energy conflict with the prototype concept, due to which the chaos emerges. The result of its self-development (trajectory **4-5**) leads to the influence of the energy of the emotional-and-pragmatic potential of the sought-for behavioral option (speaking-and-thinking and thinking-and-acting activities), the individual's psychic sphere as

a self-developing cognitive system performs another search for the analogue concept being emotionally closer to the person's mentality (point 5).

Let us pay attention to the fact that the partial attractor (4-5) is in its essence a reverse (or recurrent) attractor, whose trajectory shows that the system of a concept search or its generation tends to go back to the bifurcation point (3).

We shall note here that the phenomenon of the reverse attractor is viewed in details in the paper [Kalyta & Klymenyuk 2017: 23–24, 34–36] focused on modeling the processes occurring in the flow of individual's thinking, while the phenomenon of its occurrence is called the loop of taboo.

Going back to the model (Fig. 2), we shall see that the next partial attractor is generated in the chaos of point (5), whose final point (6) is located under the influence of a rational type of thinking in the individual's transcendental sphere. It is crucial to understand that in the process of the cognitive system self-development in search of the problem solution, the prototype concept 4 is transformed into the analogue concept 6 being nearest to the prototype location.

Thus generated analogue concept 6, after passing the stage of non-equilibrium within the rational type of thinking, enters into the consciousness of the individual (C) and, being formally controlled by the logical dialectical type of thinking, materializes (the vector **R**) in the form of the complex of means realizing the individual's speaking-and-thinking and thinking-and-acting activities which his/her psyche has been searching for.

It should also be kept in mind that the prototype concepts, as well as the analogue concepts being stored in the memory, depending on the level of the person's development, the state of his/her psyche and conditions of communication or common activities can be extracted by his/her consciousness from any of the spheres of the individual's spiritual being (existential, mental, transcendental).

4. The choice of parameters of order and the unification of notions

Now we shall turn our attention to the specificity of the researcher's choice of the parameters of order as a complex reason that integrates in itself the above-mentioned controlling effects (**X**) characteristic of each of the spheres. Let us consider this issue reflected by the example in Fig. 3.

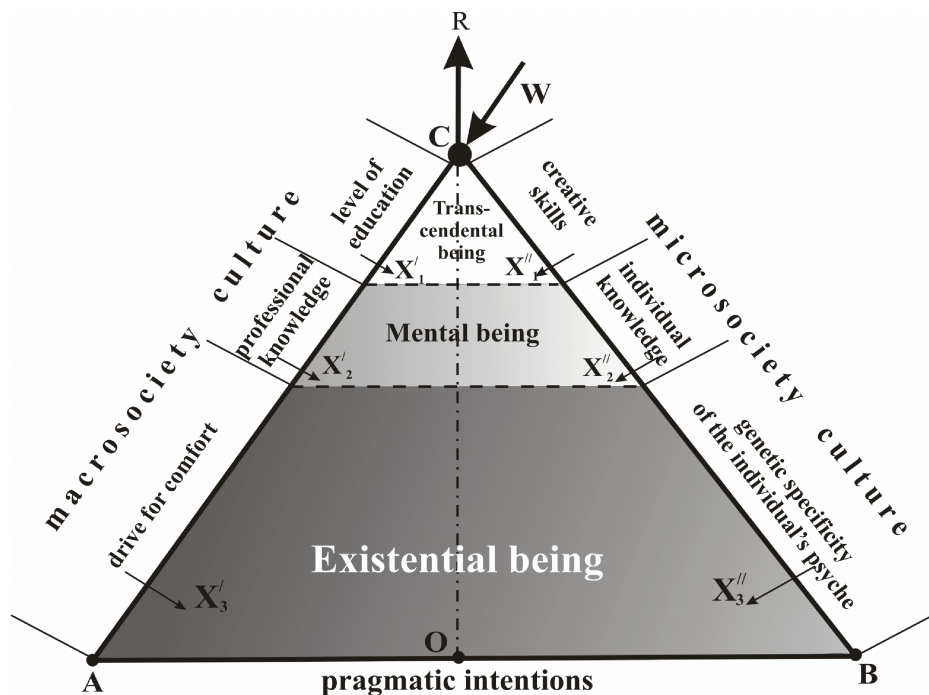


Fig. 3. The sample scheme of possible combinations of controlling effects serving as the elements of the parameters of order that govern the result of cognitive processes of speaking-and-thinking self-development

The scheme reveals that the researcher has chosen the following parameters of order that form the shell of a complex open cognitive system under consideration: the speaker's pragmatic intentions, the culture of the surrounding macro-society and the culture of his/her micro-society.

These three parameters of order are of a complex nature and of a high level of abstraction. Consequently, for the sake of practical description of reasons that cause the changes in the system behavior (or its states) at each separate level of the cognitive system self-development (existential, mental, transcendental), it is necessary to define those controlling effects that have become the essential reason for such changes. It is also known that the major controlling effects are found experimentally or on the basis of quantitative indicators using the method of expert evidence [Klymenyuk 2006: 237–267].

In the given example (see Fig. 3), the nomenclature of controlling effects within the scope of the notion of micro-society culture includes: genetic features of the person's psyche, his/her individual knowledge and creative skills. In each described case, depending on the study object and its aim, the controlling effects within the micro-society culture as a complex parameter of order can be the state of the individual's psyche, his/her physical conditions, the type of psychic accentuation of his/her personality (demonstrative, paranoid, obsessive-compulsive, and impulsive), the personality type in relation to the temperament theory (sanguine, choleric, melancholic, and phlegmatic). Besides, we cannot but add such controlling effects which also matter in the course of the cognitive system self-development description: a social orientation of the individual's personality (introvert, ambivert, extravert), traditions, rituals, customs, norms of behavior, adopted by the individual within the culture of his/her micro-social environment, as well as his/her aesthetic, ethical, and legal apprehension of reality, individual specificity of his/her personal development, etc.

As to the nomenclature of governing effects being within the scope of the notion of macro-society culture, the researcher is free to include the following: the level of individual's conflict intensity, the formality degree of communication or any other social interaction, strictness of macro-social requirements as to the compliance with the norms of communicative behavior, the degree of the individual's acquisition of culture, traditions and official norms of professional communication, the ability to focus on socially important goals and results, ability to collaborate, the individual's level of acquisition of modern methods of searching for non-traditional solutions, etc.

Concerning the aforementioned disturbing effects, which can significantly influence the behavior of the cognitive systems under analysis, we are to mention the following. Firstly, all the disturbing effects are traditionally divided into external and internal ones.

Thus, the external disturbing effects may include the threat to the individual's safety or life, the threat of punishment, unpredictability of vis-à-vis behavior, factors that distract the speaker's attention, unexpected changes in the conditions or circumstances of communication, the change of the speaker's role in communication and the like.

The internal disturbing effects may comprise the feeling of pain in the speaker's body caused by the specificity of his/her upbringing or genetic cognitive responses to external or physiological stimuli, various types of inferiority complexes acquired in the processes of socialization, moral or ethical principles underlying the formation of an individual's personality, an ethnic mentality of an individual and so on.

The functional essence of the disturbing effects lies in their role as one of the important reasons of the chaos generation at the bifurcation points of the speaking-and-thinking and thinking-and-acting processes in the individual's psyche. These disturbing effects occur while exciting the person's psycho-physiological energy. We also have to remark here that the mentioned effects can be of informational, energetic and material nature.

In order to understand the methodological interdisciplinary potential of the model (Fig. 2) there is the necessity to unify the notions that describe the self-development of the processes which

generate speaking-and-thinking and thinking-and-acting activities in the individual's spiritual sphere.

Since in the model, all the discrete points representing initial and final attractors' points are, in their essence, the concepts of a certain degree of complexity, in the paper [Klymenyuk 2017: 443] we substantiated the following academic definition of the notion of concept.

The concept is a sense integrating unity of any degree of complexity, whose systemic matrix structure, being present in the person's speaking-and-thinking and thinking-and-acting processes as a unit of sense and having a certain degree of abstraction while reflecting the real world objects and phenomena, and is consistently created in the existential, mental and transcendental spheres of the individual's spiritual being in the form of a clear image, independent of the perceptual nature of its origin, capable of being stored in the memory and constantly updated as a result of cognitive stochastic processing by the individual's emo-rational type of thinking of the new logical and perceptive information, that allows the consciousness to describe this image anew and more completely using the logical means of natural or artificial languages.

Due to this unification, specialists in cognitive studies as the representatives of an interdisciplinary science, while modeling cognitive processes, get the opportunity to ascribe the content of the concept-points with the required conventional notions of any level of abstraction. These notions may include, for instance, the individual's conceptual sphere, general picture of the world, scientific picture of the world, physical (chemical, technical, biological, social, demographic, cultural, pedagogical, linguistic, aesthetic, etc.) picture of the world, the concept image, gestalt, frame, pattern, the concept-scheme of actions, concept-picture, concept-scenario, concept-domain, emotional concepts (tactile, auditory, visual, olfactory, taste, smell, color-and-sound, taste-and-smell, sound-and-emotional, smell-and-emotional, taste-and-emotional, light-and-musical, color-and-verbal, sound-and-color, color-and-musical, phyto-and-visual, visual-and-smell, visual-and-flavor, tactile-and-visual, taste-and-visual, background concepts, etc.) (see [Klymenyuk 2017: 438–460].

Finally, the last issue under consideration concerns the application of psychological frameworks and their terminology while describing cognitive processes based on the model of pyramid of the spheres of individual's spiritual being (Fig. 4).

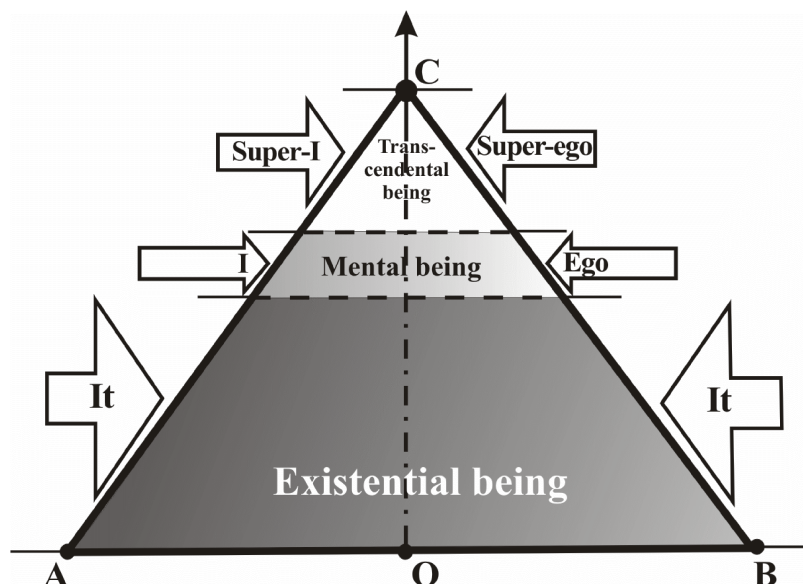


Fig. 4. Methodological scheme of assigning psychological concepts to the spheres of the flow of cognitive processes

From the works of Z. Freud (see, for instance, [Frejd 1990]), it is not difficult to see the essence of the following notions introduced by the scholar. He says that “It” is generated as a result of the

splash of psychic energy in the sphere of the individual's unconscious emotional type of thinking and, being guided by the principle of pleasure [Frejd 1990: 444], practically does not distinguish between "self" and "non-self". In this case, the unconscious incomprehensible "It" arises on the border with "I" and partially merges with it. It is therefore quite logical to refer the notion of "It" primarily to the description of cognitive processes, whose self-development occurs in the existential (unconscious) sphere of the individual's spiritual being as well as to understand that its interaction with "I" begins at the juncture of existential and mental spheres.

As shown above, the "Ego", being based on the emotional type of thinking, is directed at decision-making in the search of pleasure grounded on the principle of reality [ibid.: 443], considering external conditions and internal taboos. At the same time, Z. Freud notes that "I", emerging as a part of "It" [ibid.: 431] and embodying the intellect and reasonableness, tends, under the influence of external world conditions, to replace the principle of pleasure, which "It" generates, by the principle of reality. It is rational to use these related, however not identical notions while describing the results of interdisciplinary studies of cognitive processes considered within the scope of the self-development of educational and behavioral phenomena.

In its turn, the author proposes to view the "Super-ego" as the phenomenon emerging under conditions of contradictory interaction of the conscience and the "Ego-ideal", determined by the results of the person's previous education acquired under the influence of socially significant taboos. At the same time, Z. Freud views the "Super-I" as the supreme authority in the structure of the person's spiritual being, unconsciously performing the role of the inner censor [ibid.: 433–439] for the reason of identification with this or that object. Here, one cannot deny the presence of the rational type of thinking, which substantiates the necessity to refer these notions exclusively to the sphere of the individual's transcendental being.

5. Conclusions

The results of this research make it obvious that the cognitive universal model of the pyramid of the individual's spiritual being due to its practically unlimited methodological potential is valid for describing infinite multitudes of existing phenomena of individual's speaking-and-thinking and thinking-and-acting activities during his/her verbal and social interaction, since this is the very model that allows the researcher to achieve the following:

- to implement a systemic approach to planning and conducting both interdisciplinary and science-specific research on cognitive phenomena;
- to consider non-equilibrium stochastic processes of speaking-and-thinking and thinking-and-acting activities from the standpoint of modern theories of self-developing chaos, the disaster theory, etc.;
- to cover and describe any no matter how large number of the parameters of state of speaking-and-thinking and thinking-and-acting processes, considered as open nonlinear systems, as well as to choose out of them the parameters of order in accordance with the scientific research objectives;
- to use general scientific terminological abstractions of theoretical paradigms of adjacent fields of knowledge to adequately describe the results of interdisciplinary studies of cognitive phenomena employing the four-level model of the spheres (existential, mental, transcendental, and consciousness) of the individual's spiritual being.

Methodological prospects of the wider application of the cognitive model of the person's spiritual being pyramid is viewed in the unlimited possibilities of its use in the study of any processes related to the individual's intellectual and transformative activities studied by such sciences as linguistics, sociology, psychology, history, political science, economics and others.

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