



General Psychology

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Problems in defining the concept of “psychics”

Different approaches towards one of main psychological questions “Mentality, what is it” are scrutinized in this article. The authors show, that recognition of the mentality to be non-material and unphysiologic formation, as well as its reduction to physiological processes, should be considered as deadlock directions of the psychological research. They pay attention to purposefulness of mentality definition as particular brain attribute, which doesn't provide the reflection of the objective reality, existing at present or which existed in the past, but the construction of the closest future, which has never been before and which doesn't exist at the moment. The authors give the scheme, illustrating the gist of the idea, forming the basis of this definition of mentality. The model of functioning of “complicated” neurophysiologic processes with psychological attributes, called “mentality” is suggested.

Key words: *mentality, psychological attribute, correlation of “physical” and “mental” psycho- physiological problem, psycho- physiological parallelism, neurophysiologic reductionism.*

The urgency and the importance of a problem in defining the concept of “psychics” have always been highlighted in Psychology, since Decartes formulated a “psychophysical problem”. This problem was also considered as an crucial by L.S. Vigotskiy (1982) who wrote, “the question about psychics, conscious and unconscious has the defining methodological value for any psychological system. The decision of this basic for our science a question determines the destiny of our science.” (p. 132). N.I. Chuprikova (2004) gave one of the last statements concerning this theme in the following words, “Psychology has always experienced considerable difficulties while trying to define own subject. They exist also in our days... However all difficulties begin when the question about what is the psychics is being raised.” (p. 104).

Originally, concept of “psychics” was introduced in connection with the definition the concept of “life”. The psychics was considered to be a substance which animated the body. As the signs of life it was considered the ability of a body to react to external influences in the impellent form (in the form of movement) or in the form of sensation.

As any motor activity of the body were accepting as the life's sign that in its turn were considering as manifestation of the psychics, the concept of “psychics” was appeared connected with the concepts of “reaction” and “movement”. Probably, owing to this circumstance in the beginning of XIX century Jean Batist Lamarck (1935) offered to classify the levels of the psychical organization of living beings according to their



behavioral forms. Developing his own theory of evolution, he supposed that evolution of life was based on a psychological reaction of an organism to the external influence. He thought that the main factor of organisms' changeability was their ability to respond to the affecting stimuli, then exercising, to develop those kinds of reactions which were more essential for the organism, and finally to transmit the acquired and developed reactions by genes. J.B. Lamarck also noted that organisms changed not because the environment directly affected them, but due to the fact, the environment changed the psychics of a living being. In accordance with this assumption, he has suggested the first classification of psychical acts. He considered that the simplest psychical act is irritability, a more compound one is sensitivity and the perfect one is consciousness.

It is interesting to note that not only J.B. Lamarck was connecting all kinds of organism reactions with the psychical acts. A.A. Severtzev (1982) in his famous work "Evolution and psychics" postulated that the basic types of psychical activity of animals along with the activity of a reasoning type are reflex and instinctive activity as "extremely important gene-transmitted mechanisms of adaptation for organisms."

Presence of mental activity at the elementary organisms without nervous system and a brain is supposed also in our time. E.A. Klimov (1999), for example, urges us "to leave ... habitual understanding that the psychics is nothing else but function of the nervous system, brain." (p.166). He says, "the nervous system **provides** rather than pre-determines the psychic activity... We know that a prenervous system of the psychical development of elementary organisms exists." (p.167).

Representation that not every form of reaction of an organism on external stimulus should be connected with the concept of "psychics" was defended by A.N. Leontiev (1983). As well as J.B. Lamark, A.N. Leontiev thought that first of all life have to be considered as a process of interaction between the organism and the environment. He also pointed, "wherever we are facing life we are facing mobility and that irritability is the general property of all live bodies to acquire active state under the influence of external stimulus." (p. 148). However A.N. Leontiev did not connect irritability with a psychical act and the concept of "psychics". From his point of view, an assumption that all living organisms possessed the psychics was contrary to up-to-date elementary organism theories. He claimed that "the psychics can be a product of the further development of living matters, further development of the life itself" (p.143) and he was associating the psychics with formation of the nervous system in organisms and their "sensitivity" ability. A.N. Leontiev suggested sensitivity but not irritability as the elementary form of the psychics. At the same time, he closely connected the concept of "sensitivity" with the concept of "sensation" equating them with each other. A.N. Leontiev wrote, "we shall take sensation, which reflects objective external reality, as the elementary form of the psychics, and treat the problem of the origin of the psychics in this concrete form as the problem of the genesis of a "capacity for sensation" or (what is the same thing) sensitivity proper." (p.145). As a result of the analysis of the peculiarities of the organism and the environment interaction, A.N. Leontiev concludes that



“the function of the processes determining the organism activity directed to their survival, is nothing else but the function of sensation, i.e. ability to sense.” (p.172).

I.P. Pavlov (1996) had another view on the processes that predominated the organism activity. When he was analyzing or describing phenomena connected with the production and demonstration of unconditioned reflexes of different complexity degree by animals and people, he came to conclusion that the concept of “psychics” could be completely excluded and changed for the concept of “higher nervous activity”. In one of his works he says, “it is more correctly to call activity that provides stabilized and compound relations of the whole organism with the environment, “higher nervous activity” instead of the old term “psychics”” (p.473). I.P. Pavlov thought that the psychical phenomena differed from the physiological phenomena in its degree of complexity.

It is necessary to say that Pavlov’s attitude to the conditioned reflex as extremely important and its actual equating to the psychical process in common with the Leon-tiev’s view on the sensitivity as primordial form of the psychics that was also directly connected with the concept of “conditioned reflex”, defined a strategic direction in the research of “psychics”. The possibility of description and explanation of compound behavioral forms of animals and people based on sensitivity, simple and compound conditioned reflexes, was an obstacle to the search of alternative definitions of “the psychics”. In order to make people more developed than animals, and not to allow considering the human’s behavior as a set of conditioned reflexes (even the complex ones), researchers decided to use the concept of “consciousness” as the highest development degree of the psychics. As a result, it was considered that animals’ behavior is based on mechanisms of conditioned reflex while people’s behavior is being regulated by mechanisms of their consciousness. However, the question what are those mechanisms and how being the property of the brain, they are being realized in nervous system, remained without the answer. Moreover addressing the first Russian conference on Psychology of consciousness that was held in Samara in summer 2007 and the congress of Russian Society of psychologists recently conducted in Rostov-na-Donu, one of the leading specialists in the consciousness field V.M. Allahverdov pointed that we still do not know neither what is the psychics nor what is the consciousness.

Certainly, V.M. Allahverdov a little bit exaggerates while pointing this. Nevertheless, something we know it about both consciousness, and psychics. A view on the psyche as a specific property of the organism that appears at a later stage of evolutionary development of all living beings is almost commonly accepted. Moreover, it is accepted, that not the whole organism possesses this property, but its specific part called brain. As N.I. Chuprikova (2004) marks, “nowadays nobody doubts that psychics of animals and people are a function of the brain. However the question is how to express the nature of this function in language of the working brain and how consistently to associate this function with what is being described in psychology language as sensation, perception, memory, feeling, thinking and etc.” (p. 104).



Pointing how this problem can be solved, N.I. Chuprikova writes, "... the concept of "psychics" must be defined as a system of specific processes of the brain activity which execute the reflector function and regulate behavior." (p. 111). Moreover, she suggests designating these particular processes as the "psychics." "If the brain activity is a reflection of the reality and regulation of the behavior and activity hence this is the psychics." (p. 111).

In connection with this, it is opportunely to consider an extract from the V.M. Allahverdov's work (2003) that shows in what deplorable state our psychological science is in attempts to define the concept of "psychics." Developing a new science called "Psychologics" as an alternative to the traditional Psychology, V.M. Allahverdov writes that "... almost all theoretically different psychological schools suppose that the psychics... is intended for reflection of reality and regulation of activity... It seems to be logical: if the psychics and the consciousness do not regulate the activity, they are likely unnecessary, if they do but do not reflect a reality their existence is absurd. But may be exactly this habitual banality is not right? Psychologics does not accept such an ordinary view, and supposes that the organism is realizing both the regulation and the reflection automatically and the psychics is unnecessary in this case." (p. 5).

Not only that psychologists cannot be defined till now with concept of "psychics" so presence of the psychical form of reflection and the psychical form of regulation of behavior is still put on doubt in general. It is possible, of course, "to go another way" in Psychology also, "having destroyed all until the basis, and then ...". Whether but it is necessary to do it?

At the same time, the definition of psychics as a refractory and regulatory activity of the brain suggested by I.N. Chuprikova has to be sufficiently corrected. First of all, that is because reality reflection and behavior regulation are not the activities of the brain, but its functions discovering what the brain is for. But don't elementary organisms without brain and well-developed nervous system have these functions? Regulation of the activity of any living being even in case of irritability manifestation is always realized based on reflection of specific properties of an affecting external stimulus. Before reacting in a specific manner, the organism has to get some knowledge on the stimulus properties e.g. its modality, intensity, spatial orientation. Without these knowledge, the organism will not be able to react adequately.

Therefore, defining the psychics as a general ability of the organism to reflect reality and regulate behavior, we virtually attribute the psychics to any organism (even those not possessing the brain). In connection with this, it would be more correct to consider the psychics as a property of the brain that provides a *specific* form of reflection, and correspondingly a *specific* form of behavior regulation, the form that is impossible without the brain. In this case, the question of the psychics is transformed into the following: what specific brain function is this, which provides a specific reflection and a specific form of behavior regulation?

From the point of view of natural sciences, in particular physiology, it is undoubted that definite material processes realized in the nervous system underlie any motor



act of both people and animals. Purely physiological, i.e. material processes determine muscle contraction and movement appearance in the organism. In this case, V.M. Alakhverdov is absolutely right. Of course, the motor activity is impossible without the physiological processes of innervations of separate muscle groups. But why is it necessary to deprive the psychics of the function of reflection and behavior regulation?

The question how the regulation of the motor activity of the organism refers to the psychics and the psychological processes, and, what is important, impossibility to solve the problem of the ratio of "brain and psychics" result from the fact that originally the psychics has been considered as non-material, and not reducible to physiological processes. That is why the following problem arises: "How can the psychics being non-physiological and correspondingly non-material affect the physical, i.e. the material and regulate motor activity?" As an alternative variant of the psychics definition it is usually suggested to consider the psychics and psychological processes as physiological formations but more complex ones. As the analysis shows, both variants occur to be dead-end. In the first case psychics is specific formation separated from the brain and in the second case the psychics stops being something specific, and, acquiring a physiological status, virtually deprives Psychology of its own object and subject of investigation.

At the same time, there is one more definition of psychics that is mentioned in the literature and commonly used but hardly being developed at present. It is a definition of the psychics as a specific property of the brain and its neurophysiologic processes. According to this approach, the psychics is not reduced to physiological processes even the complex ones; however it can not be considered apart from them, as it is their specific property. But what type of property is this? This is the question that we need to answer.

The above-mentioned mechanism of motor activity regulation on the basis of physiological processes taking place in the organism in response to an external influence can be presented as follows:

$$S \ V \ R \tag{1}$$

According to this scheme an external stimulus S leads to change in the certain physiological processes V , which in their turn cause the certain motor reaction R .

Supposing the change in the physiological processes V resulting from the stimulus S is a physiological form of knowledge S'_V about the stimulus S and considering that the motor reaction R is built on the basis of this knowledge, the above-presented ratio can be transformed into the following:

$$S \ V \ S'_V \ R \tag{2}$$

Introducing a definition of psychical reflection as a subjective image of reality or as a specific knowledge of the reality S'_Ψ , resulting from specific psychical processes Ψ , the following ratio can be presented for the psychical form of behavior regulation:

$$S \ \Psi \ S'_\Psi \ R \tag{3}$$

In scheme 2 and 3 we can observe that in the first case the knowledge of the stimulus S is connected with physiological processes V , and in another case it is con-



nected with the psychical processes Ψ . Therefore, providing there is the same stimulus S and the same reaction R in both cases, can we assume that the knowledge of the stimulus in a form of the physiological processes S'_V , and in a form of psychic processes S'_Ψ are similar?

On the one hand, if the physiological and psychical processes are different, even specific, the results obtained must be different too. On the other hand, if S'_V and S'_Ψ are the knowledge of the same stimulus S , and the same behavior R is built on this knowledge, why must they be different? But if they are not different, what for do we have to introduce a definition of psychics? Or is their difference not in their structure but in their functioning and do they play different roles in behavior building?

Let us consider some possible ways of the problem solution.

First, we should accept the fact that the stimulus S can directly affect just a certain receptor systems of an organism resulting in the appearance of a certain physiological (neurophysiologic) processes that can be marked as R_e . If we accepted the possibility of direct influence S on the psychics or psychical processes Ψ , excluding the receptor systems of the organism, we would admit the substantiality of psychics and therefore turned back to the first pre-scientific views on the psychics and psyche.

Taking into account the presence of the receptor processes R_e , scheme (2) must be presented as follows:

$$S \rightarrow R_e \rightarrow V \rightarrow S'_V \rightarrow R \quad (4)$$

But there is a problem connected with scheme (3). Undoubtedly, as an initial stage for the obtaining of the knowledge S'_Ψ , ratio $S \Rightarrow R_e$ must be presented. Then however, different variants are possible.

1. "Linear determinism"

In this case the psychical form the knowledge S'_Ψ is presented as a result of the consistent transformation of neurophysiologic form of the knowledge S'_V , i.e. S'_Ψ can be characterized here as a specific "neurophysiologic product":

$$S \rightarrow R_e \rightarrow V \rightarrow S'_V \rightarrow S'_\Psi \quad (5)$$

The question, how "neurophysiologic processes" generate "psychical processes" and how they are connected with each other, makes up the so-called "psychophysical problem". The attempts to solve this problem by means of "linear determinism" have always led the researchers to neurophysiologic reductionism, i.e. reducing of the psychical processes to the neurophysiologic processes. They as the complex forms of the neurophysiologic processes considered the psychical processes. For example, I.P. Pavlov (1996) denied the usage of the concepts of "psychics" and "psychical process" and wanted to replace them by the concept of "forms of higher nervous activity". Supposing that the psychical phenomena differ from the physiological phenomena according in their degree of complexity, he says, "It does not matter how they are called: psychical or complex nervous phenomena", in contrast to the simply physiological ones..." (p.346).

According to the theory of "linear determinism", in particular, the theory of I.P. Pavlov, one can say that the simple physiological processes and the appropriate psychi-



ological forms of the knowledge S'_v take part in simple behavioral form regulations, but as for the complex forms, they are regulated by more complex physiological processes which are called "psychical processes".

Graphically the processes of behavior regulation based on physiological (S'_v) and psychical (S'_ψ) forms of the knowledge in terms of the "linear determinism" (or "neurophysiologic reductionism") can be presented in the following way:

$$S \Rightarrow R_e \Rightarrow V \Rightarrow S'_v \Rightarrow S'_\psi \Leftrightarrow R_{ca}. \quad (6)$$

The main problem stated in this theory is a problem of connection between different forms of physiological knowledge S'_v and S'_ψ according to their complexity degree: what complexity degree must the physiological form of the knowledge have to be attributed to "the psychic processes"? Then, talking about the complexity of behavioral forms, the question can be put in a different way: how complex must the behavioral form be to assume that its regulation is based not on the simple physiological forms of the knowledge S'_v , but on the complex or "psychical" forms S'_ψ ?

Answers to these questions are suggested in the works of N.I. Chuprikova (2004, 2005), I.P. Pavlov (1996), V.M. Bekhterev (1991), A.N. Leontiev (1984). The basic criterion, according to which behavior can be referred to 'the psychical processes', from Pavlov's standpoint for example, is that the conditioned reflex or more complex combined one are presented in the behavior. V.M. Bekhterev's position lies in the fact that the psychical forms of behavior are those that built on the basis of individual past experience. A.N. Leontiev considered the psychical to be sensitivity, i. e. the ability of the organism to react in response to abiotic stimuli that are carrying out a "signal" function. From Chuprikova's standpoint, any reactions of the organism, which were adequate to the parameters of causing them stimuli, could be considered as psychical. "Both logics and an actual situation require to consider the reflective brain activity regulating the behavior as a psychical activity, the psychics itself. We are not trying to reduce the psychics to the brain activity or to "deduce" it from this activity. We are talking about the fact that the two different concepts have been observed for a long time, two different realities, whereas in fact one reality exists." (Chuprikova, 2005, p. 362).

B.F. Lomov's (1984) statement can be taken as an example that criticizes the theory of 'linear determinism' of the psychical processes. "... it is incorrect to consider that a psychical reflection follows a physiological process, i.e. the former is the result of the latter. The psychical appears and is develops not at the end of neurophysiologic processes but during their development. Every part of the neurophysiologic process is also a part of the psychical process. One is impossible without the other." (p. 156).

2. "Psychophysical parallelism"

According to "psychological parallelism", psychical and neurophysiologic processes are two different parallel processes that are connected with each other in a certain way. Graphically it can be presented as follows:



$$S \Rightarrow R_e \begin{matrix} \rightarrow \\ \rightarrow \\ \rightarrow \end{matrix} \begin{matrix} \Psi \Rightarrow S'_{\Psi} \Rightarrow R_{ct}. \\ \Updownarrow \\ V \Rightarrow S'_{V'} \Rightarrow R_{np}. \end{matrix} \tag{7}$$

This scheme for example presents the Bekhterev’s point of view who accepted the fact that the psychical processes are independent, but at the same time, they are closely connected with the nervous processes. He wrote, “everywhere the psychical phenomena are closely connected with material processes which take part in a certain regions of the brain... There is no psychical process that could be purely subjective or spiritual in the philosophical sense and was not accompanied by a certain material processes... At present we may and must talk not about spiritual or psychical processes, but about the nervous-psychical processes and everywhere where we deal with psychics, it is necessary to mean actually nervous-psychical processes, or in other words - neuropsychics” (Bekhterev, 1991, p.15). The necessity of considering the psychical and physiological processes in their unity as different sides of the same coin was pointed by L.S.Vigotskiy (1982). In order to indicate this unity, he suggested using the term “psychological”.

The weakest place in the given scheme and in corresponding representations about mechanisms of formation of the psychical form of knowledge S_{\square} is the process of transformation of the receptor processes R_e into the psychical ones Ψ . As receptor processes are originally physiological, the same “psychophysiological problem” occurs - how the physiological causes the psychical, and what makes them different. Partly this problem is solved by V.M. Bekhterev (1991). By introducing the concept of ‘neuropsychics’, he states that the psychics can not exist apart from the material processes occurring at the nervous system of the organism. He considers the psychics as a specific property of the brain and the nervous processes, not reducing the psychical processes to physiological.

In fact, I.M. Sechenov (1942) offered this idea earlier in his work “Reflexes of the Brain”. The significance of the I.M. Sechenov’s theory along with its further development in V.M. Bekhterev’s and I.P. Pavlov’s works is that the psychics is considered not as an independent substance, but as a property of the brain. It is the brain and the nervous system that have been accepted as a material basis of the psychics and its material substance.

If we take the property of the brain connected with the psyche as V_{Ψ} , ratio (7) can be presented as follows:

$$S \Rightarrow R_e \begin{matrix} \rightarrow \\ \rightarrow \\ \rightarrow \end{matrix} \begin{matrix} V_{\Psi} \Rightarrow S'_{\Psi} \Rightarrow R_{ct}. \\ \Updownarrow \\ V \Rightarrow S'_{V'} \Rightarrow R_{np}. \end{matrix} \tag{8}$$

It is obvious, that ratio (8) corresponds not only to the definition of B.M. Bekhterev, but to the I.P. Pavlov’s and N.I. Churikova’s ideas of the psychical processes.

A view on the psychical process not in opposition physiological one but as its specific property, allows us to keep specificity of “psychical” and moving away from the traditional Cartesian dualism consider the present problem from the point of view of



natural sciences. In this case, we should ask which specific properties physiological processes must possess to be considered as “psychical”.

For the first time, a solution of the problem was offered in our work (Kornienko, 2000), and in more detail in the works (Kornienko, 2005a, 2005b, 2006). We took the following definition of the psychics as a basis. *Psychics is the property of the brain which makes it possible to acquire knowledge of the nearest future of the objects and phenomena of the reality.* For psychologists with a humanitarian warehouse of thinking the following definition of the psychics may be suggested. *Psychics is the subjective reflection or the subjective image of the nearest future of objective reality.* The difference of the suggested definition from those given in traditional psychological literature is in considering not subjective image of objective reality simply, but subjective image of the nearest future of this reality.

It would be desirable to notice at once, that P.K. Anokhin (1978) suggested the thought of the psychics as a process connected with the anticipatory reflection. However, as we mentioned it before (Kornienko, 2000), he virtually talked not about acquisition of the knowledge of future events, which the organism did not experience in the past (for what a well-developed nervous system is needed). He talked about preparation of the anticipating reactions on the events that organism experienced before and the knowledge about which already was available in his memory. While analyzing biochemical processes occurring to elementary organisms, P.K. Anokhin virtually considered not the mechanisms of the anticipatory reflection but the same mechanisms of “reviving of the past experience” as suggested by V.M. Bekhterev. Thus, if according to the theory of Bekhterev elementary organisms possess biopsychics, according to the theory of P.K. Anokhin elementary organisms have also acquired the indicators of the psychics, but in a form of the anticipatory reflection ability.

To explain our definition of the psychics and discover its biological value, let us consider problems of organism in generating the forms of motor activity, which must be adequate to changing life conditions on condition that this organism does not have the psychics.

In case of non-psychical (physiological) forms of cognitive activity, the reflection of the properties of the external influence in sensory system of the organism follow after the influence, and may be presented by ratio (4). As a result, a subjective reflection of the influence (or the knowledge about the influence) appears in a form of the sensory process $S_{V'}$, which can be sufficiently adequate, however this is a reflection of the past influence. The changes occur in the sensory processes in a small degree but later with regard to the changes in the external reality. The changes in motor processes taking place in the motor system to provide the reaction of the organism on the external influence are generated all the more later.

Let us watch a situation C_j , in which a behavioral or a motor reaction of the organism must be occurred is appeared at the moment t_j . Let's also consider that by the time t_j , the organism has already acquired an adequate knowledge of the situation C_j , in a form of the image (C_j'). It is obvious that the application of this knowledge



in realization of motor reaction proposes a certain inner regulatory processes in the organism. It is obvious also, that on activation and realization of these processes it is required a certain time Δt . This means that the reaction of the organism on the situation C_1 based on the knowledge $(C_1)'$ will be realized at the moment $t_2=t_1+\Delta t$. However by this moment the initial situation C_1 can be significantly changed and the organism can find itself in another situation C_2 in which his reaction will be inadequate (see Figure 1), and it is fraught for an organism with serious consequences.

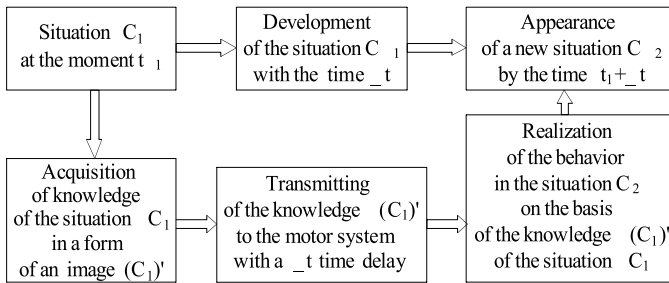


Figure 1. Mechanism of appearance inadequate behavior in a changing situation in the absence of the psychical form of the behavior regulation.

The organism will be able to react in an adequate way in a changing situation under one condition. Being in the situation C_1 , it must built its behavior not on the basis of the knowledge $(C_1)'$ of the present, but on the basis of the knowledge $(C_2)'$ of the nearest future of this present which should come through Δt amount of time (the value of Δt depends on the speed of the inner regulatory processes in the organism).

According to our definition, the psychical form of cognitive activity, in contrast to the non-psychical one, is characterized by the presence nervous processes in the nervous system that correspond with the knowledge not of ‘the present’ of external influence but its ‘nearest future’ which are expected to be through Δt amount of time.

In order to acquire the knowledge of the influence nature in the nearest future, the nervous processes in the nervous system must realize the following function (Kornienko, 2005b):

$$\tilde{N}'_{n, future} = \tilde{N}'_{present} + (\tilde{N}'_{present} - \tilde{N}'_{n, past}) \tag{9}$$

where $\tilde{N}'_{present}$, $\tilde{N}'_{n, future}$, $\tilde{N}'_{n, past}$ - the knowledge of the situation C in the present, nearest future and nearest past.

Neurophysiologic mechanisms of realization of the function (9) characterizing property of nervous processes which by definition is called as the psychics, for the elementary case corresponding to sensation, are considered in our works (Kornienko, 2005a, 2005b, 2006).



A scheme describing the mechanism of knowledge acquisition of the nearest future situation $C(t_2)$ on the basis of the knowledge of the present $C(t_1)$ and its the nearest past $C(t_0)$ can be found below in Figure 2:

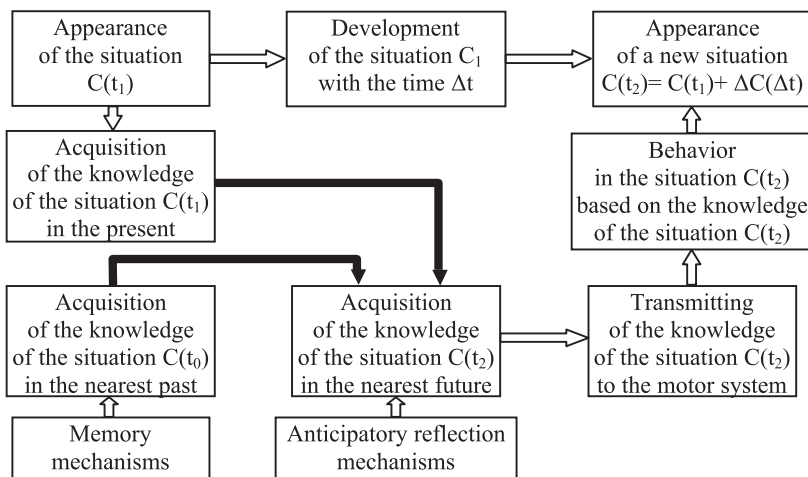


Figure 2. The mechanism of knowledge acquisition of the nearest future and formation of adequate behavior of an organism in a changing situation.

The definition of the psychics as a property of the brain to provide acquisition of the knowledge of the nearest future of the objective reality and mechanisms of the realization of this property allow us to present the ratio of “the physiological” and “the psychical” in the following scheme:

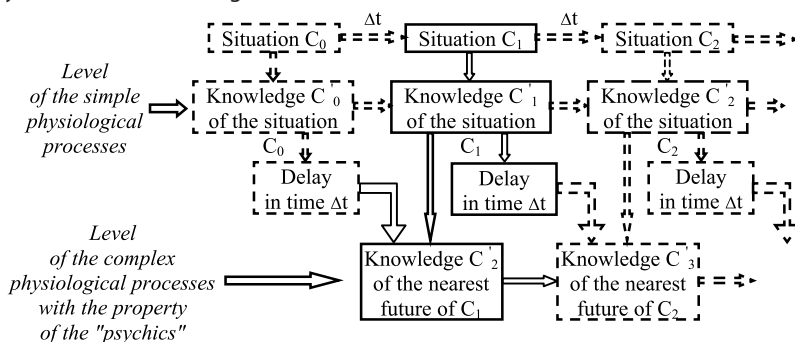


Figure 3. The ratio of the simple and the complex physiological processes taking place in a brain at realization of the mechanism of the psychical (anticipatory) reflection of reality.



Physiological processes at the simple level (see Figure 3) provide the reflection of “the present”. Complex physiological processes can provide the anticipatory reflection, i.e. the reflection of the nearest future of the objective reality. However, in both cases these processes are the physiological ones. The psychics is not the complex physiological process but its property and ability to provide anticipatory reflection of the objective reality.

At the analysis of the presented scheme, it is necessary to mean, that nor complex physiological processes nor their results are not psychical. The last according to D.I. Dubrovsky (1990), for example, can be associated with concept “information”. What complex physiological processes would not be, they remain physiological. The recognition of opposite assumption would be manifestation of classic psychophysiological reductionism. Another matter is a property of these processes. If the physiological processes taking part in the brain provide acquisition of the knowledge of the nearest future, they possess a property, which by the definition is called “psychical” or the “psychics”. Thus, the psychics is not the knowledge of the nearest future of the reality that are obtained in the result of complex physiological processes, but the property and the ability of these processes to acquire such knowledge.

It is obvious, that a simple physiological process and the physiological process with psychics are two parallel processes, which take place on their own levels and at the same time are closely connected with each other. The nature of the complex physiological processes that possess the property named psychics, directly depends on the state of the brain and numerous physiological processes in the brain and body that not only connected with the acquisition of the knowledge of objective reality but also provide the work of other survival systems of organism. Any disturbance and changes in realization of brain physiological processes are sure to cause the changes of the anticipatory reflection ability or the function of the brain called the “psychics”. Any changes in the psychics are nothing else but the changes in the realization of the complex physiological processes and due to this reason, they are able to affect other material physiological processes of the organism.

The suggested definition of the psychics as a property of the brain, which makes it possible to acquire the knowledge of the nearest future of the objects and phenomena of the reality, resolves the contradicting points of the psychophysiological problem. Furthermore, it gives the answer to the questions of the biological value of occurrence of the psychics in evolutionary development of organisms and of the mechanisms of the interaction between “the physiological” and “the psychical”, taking into account a specificity of the latter.

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