

The Beginning of Knowledge of the Nature of the Brain Mental Activity **Yumatov EA***

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The brain is a unique organization in nature, having the psychic activity, which is expressed in thoughts, feelings, emotions, i.e. in the subjective perception of the man himself and the world. Knowledge of the nature of psychic activity of the brain is the most urgent and the most challenging task of science [1-10]. Undoubtedly, without the knowledge the origin of psychic activity, ideas about the brain are extremely limited, and very far from the truth.

There is a huge gap between of the neurophysiology knowledge and of the psychic functions of the brain [4,5,7]. Unfortunately, many scientists have a skeptical attitude to research the psychic activity of the brain, which they consider outside of objective scientific research, whatever it reality exists. In this regard, a Nobel Prize winner Crick told that among neurophysiologists, all attempts to speak about consciousness were interpreted as the first signs of oncoming senile dementia [9].

Despite the calls of outstanding scientists: Pavlov, Sperry, Anokhin, Bechtereva, Sudakov, [1,3,6,8,10] to explore the of the brain psychic activity, it has not wide scientific studies [5,9,10].

All of the modern ideas about brain are based only on the study of neurophysiological processes, without taking into account the psychic activity of the brain, that are still poorly understood. In all neurophysiological studies, we see only the outer, tip of the iceberg, the lower, the underwater part characterizing the mental activity of the brain; remain outside the field of view of researchers, as though it does not exist [11-16]. This explains the dip between the understanding of the psychic and neurophysiological phenomena in the brain, which indicates Nagel [5].

Hypothesis connecting the emergence of the subjective state with the structure and function of neurons microtubules was proposed by Hameroff [11]. The author suggests that subjective state of a brain arises at quantum level of its organization, and the brain is the quantum computer. However these theoretical views aren't supported with pilot studies and the evidence of their communication with subjective brain activities isn't produced. They don't allow to understand, how the brain, unlike computers and other lifeless systems, creates the internal subjective state, i.e. itself feels

Modern neurophysiological methods, based on the laws of physics and chemistry, discovered in inanimate nature, do not in

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themselves make it possible to reveal the nature of the psychic functions of the brain.

In our research, we have proposed a fundamentally new approach to the study of the nature of the psychic activity of the brain. In this case we start from a methodological principle formulated by us, that mental processes can directly register and study only with the help and participation of the living structures [12-15]. For the first time demonstrated the existence of psychogenic field, reflecting the mental activity of the human brain [12,14,16,17]. The paradigm presented that considers the origin of mental activity and the possibility of the existence of unique to the living brain of the physical phenomena and fields. Schematic diagram shows of the formation of the subjective state of the brain based on the reverse influence of psychogenic field on the neural molecular processes [14,15].

The psychic activity is a phenomenon, function, state of brain, which, we think, emerges in the interaction of structural and molecular (neurophysiologic) and field processes in a living brain. The relationship between the neurophysiological and subjective spheres of the brain activity is carried out in the field form [12-15].

In the brain may occur such phenomena and physical processes which in principle cannot be in inanimate nature The origins of mental activity are the fundamental properties of the living brain, which is a special form of matter, which has its own physical laws and the specific field [12-15].

System organization neurophysiological and mental activity of the brain has two interconnected and united in a single whole subsystem: neurophysiological and mental [12-15].

Structural and functional neurophysiological components of the system cannot carry out their productive activities without the participation of the psychic sphere, as well as mental activity is based on the neurophysiological processes. Neurophysiological layer is the foundation for the perception of the environment and the internal state of the body; for the implementation of various forms of behavior and the regulation of function of the body.

All processes in the brain start at the neurophysiologic level and then develop on the subjective level. At the first stage goes on the neurophysiologic level, and then the process of analysis and interpretation continues on the subjective level. The process is finished by decision-making and goal setting made on the subjective level.

At the neurophysiological level, there is the perception of sensory excitation flows from the senses, generated biological motivation, memory components related to storage of information, efferent,

team programs, controlling movement, behavior and autonomic reactions occur reflex reactions, automated behavioral acts, evaluation of results.

At the neurophysiologic level, the tailored reflex reaction and automatic behavioral acts are performed due to preoperational integration, which is formed earlier. In these cases, the behavioral choice takes place without the participation of consciousness.

On the mental level, there is judgment of all incoming information the brain, forming social motivation, is initiated extract the necessary information from the memory, there is the goal, and there are all the psychological symptoms, such as consciousness, thinking, emotions, etc. Main psychic brain functions: free will, goal setting, choice of behavior, thought, imagine, and the results of evaluation of achievement occur on a subjective conscious level.

Psycho neurological diseases can primarily occur in the subjective processes and secondarily manifest themselves in various structural disorders. Disclose the natures of the brain psychic activity can only theory that unifies neurophysiological and mental activity of the brain [15].

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