Modern Theory of the Psyche

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ABSTRACT

In this paper, a number of outdated but still prevailing medical doctrines are critically reviewed, in particular, Hippocrates’ hypothesis of the brain as a repository of all mental processes; I.M. Sechenov’s hypothesis of the psyche as a derivative of the brain reflexes; I.P. Pavlov’s hypothesis of the higher nervous activity as an equivalent of the psyche.

In his research, the author refers to studies of feral children, studies of memory and contemporary views of the academic science on information. The author proves the non-materiality of the psyche and the role of the brain as a biological interface between the ideal and the real.

Keywords
Brain, Psyche, Nervous activity, Information, Biological interface.

Substitution of Notions

For the last two thousand years, the psyche has been understood, in the most primitive terms, in accordance with the hypothesis suggested by Hippocrates, who declared that the brain is a repository of all mental processes. Outstanding adherents of this hypothesis, such scholars as R. Descartes [1], I.M. Sechenov [2], I.P. Pavlov [3], determined the main directions in further development of physiology, psychology and psychiatry, and there are many less known specialists who followed them. Mistakes made by great people are great mistakes, and we will return to this topic later.

Due to authoritative support from these genial scholars, Hippocrates’s hypothesis gradually became the prevailing scientific doctrine, which was further elaborated with development of science and invention of more sophisticated research equipment. The psyche was being looked for in cortex, gyros, ventricles of the brain, the subcortical brain, conditional reflexes, electric activity, wave activity and quantum activity of the brain. And finally – what a miracle! – it has been found in the synaptic cleft [4], and the exchange of neuro-transmitters was implicitly recognized as an equivalent of the psyche and the target of contemporary psychopharmacology.

Surprisingly, for two thousand years, scientists have not noticed this substitution of notions: they were speaking about studying and treating the psyche, but in reality, they were studying and treating the brain and elaborating pseudo-physiological and pseudo-psychological terminology to describe “the brain mechanisms of mental processes”.

Fallacies in Medicine

There are mistaken ideas and theories in all sciences. However, in medicine, the mistaken ideas about the psyche are in some respects different from ideas in other sciences. Hypotheses of the psyche, as soon as they were formulated, would instantly give birth to theories of psychopathology, which were immediately introduced, without critical review, into the practice of therapy and even surgery related to mental disorders. Millions of people have become subjects of these experiments. The anatomic approach to “structures of the psyche” resulted in lobotomy and dissection of callosum; the idea of electric activity of the brain led to thousands of “therapeutic” experiments with the ECT; after that, the insulin
shock was suggested but was later considered doubtful; and historically newest biochemical theories of the psyche gave birth to psycho-pharmacology as a new branch of chemical industry. Currently, therapy of mental disorders is conducted mostly by means of psychopharmacology, which targets the exchange of neurotransmitters in the synaptic cleft and thus is supposed to influence the psyche. The question is still unresolved, whether these newest methods of therapy are really effective for treating patient from mental disorders.

What is in common in all these outstanding scientists, from Hippocrates to our contemporaries? They all were attracted by a powerful and very seductive – and extremely materialist - idea: to find a material substrate of the psyche. It is important that what they meant was not a material structure, on which the psyche is based, but a material substrate of the psyche as such. This is an utterly fallacious idea.

Qualitatively different approaches to the psyche have been suggested very seldomly. Only a few names can be mentioned, such as S. Freud, who considered the psyche an epiphenomenon [5] and V.M. Bekhterev, who stated that psychiatry is a science of spirit and thus can hardly be considered a part of scientific medicine [6]. Works of D.I. Dubrovsky should not be underestimated as well; in 1960s he published a number of philosophical works on the informational approach to the subjective reality [7].

The Hypothesis of the Biological Interface
In opposition to these traditional views on the psyche – and in line with such outstanding scholars as I.P. Pavlov, who developed the notion of the second signal system – the author of the current paper suggested a hypothesis of the brain as the biological interface in 2008 [8,9]. This hypothesis elaborated the above mentioned parallel between the brain and the computer. The brain was compared to the computer hardware, and the psyche to the software. Education of the child, who was learning to use a language to communicate, was considered a kind of programming. Let us stress that the programming in technical systems also requires a certain language.

Mental activity is viewed as a kind of informational exchange and interaction, as well as accumulation and processing of information, which is possible only when a child from the earliest stages of life is immersed into a social (informational) environment functioning as an equivalent of the global net. Let me remind you J. Lacan’s saying [10] that the child is born into “the baptismal font of the language”, or, in contemporary terms, his psyche is connected to the informational network of the society (it has been shown by contemporary science that it happens as early as at the prenatal stage).

One of the key postulates of the hypothesis suggested in 2008 was the following: with time, the special role of the brain will be reconsidered, and in a new framework, it will acquire a rather modest but also important role of the link between the ideal and the real, or, in contemporary terms, of the biological interface [8]. Nobody would deny that the brain and the nervous system are material structures regulating activities of internal organs, reflex reactions and adaptive functions of the organism, and mental activity is based on these structures.

But the essence of mental activity is different. We accumulate information, process and verify information, produce information. It is the content of mental processes, which can be studied only by means of self-observation or recognized via indirect manifestations in speech and ideomotor reactions. However, we should not forget that thought and speech follow different laws. It should be admitted that what we think differs from what we say too often, not only in the everyday life but also in scientific generalizations.

The Non-Material Theory of the Psyche
Further development of the suggested hypothesis [11-16] was related to a very important concept, which had been neglected by psychologists, physiologists and psychiatrists for a long time and was not included into their theories and hypotheses. Information is understood by contemporary academic science as a non-material factor. Let me remind you that the founder of cybernetics N. Wiener emphasized that information is neither matter nor energy, information is information [17]. Later this concept became universally accepted in academic science. Only information carriers (biological, paper, electronic etc.) are material. It should be admitted that the definition given by N. Wiener is not the best one. It would be much more precise to say that information is a structure that belongs to categories of the ideal (we will return to this term later).

Although information is non-material, it acquires (but does not have initially!) certain qualitative and quantitative characteristics. It can be neutral, emotionally charged, threatening, true, false etc., but all these characteristics are acquired only in presence of a subject of its perception; in different subjects, the same information can stir completely different mental reactions (let us remember September 11, 2001, mourning in the USA and joyful crowds in Livia).

Information as such, on a carrier but without a perceiving subject, is virtually non-existent. Only living beings, and most of all, humans can be subjects of its perception, as well as produce, carry, store and verify non-material information.

Additional Arguments
A number of additional arguments supporting the above mentioned theory can be discussed. Studies of feral children (who are more known as Mowgli) show that normal human psyche cannot develop without early immersion into social environment (or, as it has been mentioned above, without language programming of the child’s brain by social environment) [18]. As we know, a personality develops when is “acquires its own bodily being that differs from bodily being of an individual” [19]. Therefore, such individuals are called feral from Latin “feralis”, which means “dead” or “buried alive” (in social sense), in this case buried in his own body, because these individuals belong to hominid family and genus of homo, but do not belong to Homo sapience.

However, such children learn certain forms of communication...
It leads to conclusion that the healthy brain is a necessary but not sufficient condition of development and adequate functioning of the human psyche; immersion into social environment and language programming of the psyche are also vitally important.

Well known cases of feral children who could communicate only in language of wolves or dogs, or were whistling like birds, have been described in scientific literature. It has been mentioned in these papers [20] that feral children, after long years in an animal community, would learn the behaviour of their “adopted parents”, and all efforts of psychologists and rehabilitation specialists to change this behaviour were futile.

Prior to making one more conclusion, let us consider a recent case of this kind. In 1992, a seven-year-old girl was found in Ukraine, who had developed normally until her severely disturbed alcoholic parents made her live in a kennel with their dog. Quite soon, the girl stopped eating and drinking in a human way and started lapping her food; she lost her speaking skills almost completely and started barking and howling like a dog; although she had learnt to walk upright, she stopped doing it and started walk at all fours. Child protection agencies received information about this case too late; the girl was admitted to a special institution for children with developmental deficiencies. Medical doctors and psychologists who observed Oksana mentioned that she preferred to walk at all fours and jump from the floor to the table; when people approached her, she would show her teeth, roar and try to bite them. She could understand some primitive phrases but almost never talked herself. She would frequently take a flight from the institution in order to join a company of dogs, with whom she identified herself.

It allows us to formulate one more suggestion, that is, psychic structures and human culture are very fragile. From this perspective, contemporary tendency to be tolerant to various subcultures and indulgently accept what had previously been forbidden by the culture requires thoughtful and careful reconsideration.

Afterword

Some colleagues, who read this material, assessed the non-material theory of the psyche as a discovery which will qualitatively change all our approaches to the psyche and psychopathology, and I am grateful to them for their appreciation. Others reacted with cognitive dissonance and promised to think it over but sounded rather sceptical; these ideas contradicted everything that they learnt, believed and used as basis for their scientific generalizations, experimental and therapeutic approaches and strategies. The third group of specialists refused to listen and to discuss this theory at all because “it contradicts the established views and authoritative opinions”. It is surprising that young people in the audience, undergraduate and postgraduate students, react to this theory with asking “Oh, is it possible that someone holds a different view?” I am sure that adequate understanding of the new theory is a matter of time, although everyone can agree that however hard you try to dissemble the radio, you will never find the music in it!

References
2. Sechenov IM. Refleksy golovnogo mozga (Reflexes of the brain). – Moscow: Ministry of education of the USSR. 1953; 31-117.
10. Lacan J. Funkcia i pole rechi i yazika v psihoanalize (Function and field of the speech and the language in psychoanalysis). The presentation at the Congress in Rome, the Institute of Psychology at the University of Rome on September 26 and 27, 1953. Russian translation. - Moscow: Gnosis. 1995.
17. Wiener N. Kibernetika ili upravlenie b svyaz v dzvitnyh i mashine (Cybernetics, or control and communication in the...
animal and the machine). Russian translation — Moscow: Sovetskoe radio. 1968; 325.

