

**CULTURE AND EPIGENETICS:
ENERGY AND INFORMATION ASPECT**

Abstract. A distinctive feature of the current stage of development is the fact that science is a synthesis of various disciplines in various fields of knowledge, and, in fact, it forms a holistic picture of the world, holistic world outlook, which is gradually replacing all the old paradigms. The article considers the issues of the correlation of human nature and culture in its evolution, biological and social development of individuals and society. In this work the cultural evolution is considered in context of energy and information aspect, that allows exploring human culture as a process that forwards human development and evolution. The study has confirmed the leading role of the human environment in its evolution, the impact on the biological structure of a man, genetics, philosophy, culture, and the ability to change the world around. Conclusions concerning culture as the driving force that will contribute to the transformation of the world outlook of a man and society, the formation of values, ideas and priorities are drawn. It is concluded that culture should be the driving force that will contribute to the transformation of the world outlook of a man and society, the formation of values, ideas and priorities.

Key words: man, cultural, evolution, epigenetics, genetic mechanism, energy, development, process, environment.

Introduction. The changes that are taking place in science are to some extent correlated to the ancient knowledge that has reached our days. New scientific discoveries in natural sciences in field of genetics, ecology, environment, social biology, neurophysiology, informational biology and epigenetics show the potential evolutionary-biological capabilities of human.

Man appears as a creator of his life, as a complex self-organized system that is in interrelation with nature and society and capable of development and evolution.

At the present stage, the question of a new understanding of human essence and nature, a phenomenon of human cultural evolution requires a thorough and comprehensive exploring, since not only the future of man, but also the future of humanity depends on man himself, on orientation of his actions and thoughts. With scientific language available for everyone it is possible to understand and comprehend the knowledge that humanity has kept since its inception.

The Results. Throughout the history of society development the culture in that or the other aspect was the subject of studying of various philosophers, historians and writers. The term "culture" is one of the fundamental ones in modern science. It's hard to find another word that would have such a large number of shades of meaning. Such expressions as "the culture of the mind", "culture of feelings", "culture of behavior" and "physical culture" sound quite familiar to us. In ordinary sense culture is a valuation concept and it refers to those personality traits that are more accurate to be called not culture, but a level of culture.

A distinctive feature of the present day is the society's search for some new philosophical ideas which arise in various cultural trends and forms of culture. In 60-70's of the XX century, with the emergence of such a scientific trend as «epigenetics», there appeared the opportunity to look at man from the viewpoint of his inner world, the mechanisms that form and regulate his life, character, thinking, behavior and culture [3]. The research in epigenetics proves that it is the environment and the experience of man which he receives during the life, leads to directed molecular changes in the genes. It is believed that these changes may be transferred further, and affect children and grandchildren.

For the first time the term «epigenetics» was introduced into the scientific use in 1942, by the prominent geneticist Conrad Waddington from the United Kingdom, as a derivative from the words «genetics» and «epigenesis» [7]. The physical nature of the genes had been studied very poorly yet then. Modern scientists use the term in a more narrow sense, considering it as a change in gene expression or cell phenotype caused by mechanisms that do not affect the change in DNA sequence.

According to the molecular biologist, Ph.D. B. Lipton, genes are just molecular «drawings», according to which a «contractor» builds cells, tissue and organs of the human body [4, p. 8]. This «contractor» is our physical and energetic surrounding, in other words, the environment, which is responsible for the cell functioning. Since each cell is guided not by genes but by the information that comes from this environment, the same thing can be said about human body as a whole. Therefore, due to the information surrounding and conscious choice, man, being a more complex system than a cell, is capable of building interrelations with the environment quite deliberately.

Thus, modern scientists consider a gene as a rather open system that really senses us and the environment. In opinion of A. Sen`kov [5] a gene is no longer regarded as a closed «black box» or «closed» stationary system for storage of hereditary information because there appears more and more scientific data on its adaptive qualities, plasticity, incredible ability to instantly respond to changes in the internal and external environment.

Research in epigenetics shows that in fact our way of life, behavior, physiology and our culture are controlled to a greater extent by our perception of the environment and our beliefs than by our genes. B. Lipton comes to the important conclusion that our body and consciousness, and, consequently, our lives are governed not by genes which are specified by the hormones and neurotransmitters, but by what we believe in [4, p. 22].

Society, nature and man are interrelated and interdependent. The state of the one reflects much the state of another. When applying the findings of epigenetics, it is possible to predict that beliefs, ideas and views become the dominant in human perception of the world, and as a result, they affect man's biological state and, subsequently, genes.

Fundamental discoveries in various fields of science, in particular, in geomagnetology, biophysics, parapsychology, physics, biology allow us to consider the universe as a manifestation of a unified energy-information field of consciousness with different levels of organization, from the energy-information to the material one. Thus energy-information paradigm of world organization begins to develop as a basis for a new synthesizing scientific thinking.

The tradition of studying the human nature in the system of energy interactions was founded by Aristotle. The philosopher, used the term "energy" to define the actual being of an object, its active action, linked to the transition from possibility to reality [1].

V. Ostwald in 1909-1911 proposed an "energetic" definition of culture as a process of "transformation of energy into the human-helpful energy, perhaps more saving use of energy without waste" [8]. According to A. Akhiezer, culture – is "an intense search of the man for himself and for his place in the world". [2] At one time, E.Tylor, along with the well-known definition of culture, offered also such a formulation "from the perfect viewpoint the culture may be studied as a general improvement of the human race" [6]. This may also tell that culture is a definite process, which is entirely dependent on its carrier and it is evolutionary.

According to studies of many modern scientists the energy-information exchange is inherent in everything that exists in the Universe. Results of exploration of energy-information interactions find a lot of forms and junctions to evolutionary programs and principles of self-organization and self-motion of matter. The apparent unpredictability of natural disasters and catastrophes is

primarily caused by inaccurate understanding of the properties of energy-information interactions in abiocoen and wildlife.

Development and evolution of the human being as a cognizing and acting subject of cognition, and as a biosocial being indicates that the implementation of its potential is possible in a result of long and consistent stages of self-organization and self-improvement. Only on passing through these stages, man is able to open all his potential in its anthropological space content, gaining the experience of consistency of its actions aimed for self-development and humanity development in the whole. We believe that the biological evolution of man is directly connected with energy-information origin that is in a man. When an energy-information evolution of the system occurs, the qualitative characteristics of its biological parameters change and as a result of interdependence of these actions the process of cosmic evolution happens.

Conclusions. We believe that the man of the XXI century has the potential to reconsider his understanding of his own nature and essence, and to become a perfect, self-sufficient and self-regulating system that possesses unlimited capabilities to change. And what the changes it will be – it will entirely depend on both man himself and on the socio-cultural environment in which he resides, on the ideas and beliefs that exist and are being recognized there, thus forming his outlook and perception of the surrounding world.

The principles of evolution make us look at the world as at a complex system of interactions of different parts of a whole. The interaction between man, nature and society need to become perceived at this stage. Understanding of human nature and its role in the evolution of humanity is to cause noospheric coevolution of man and nature, and to their harmonious mutual development.

References:

1. Агни Йога: Живая Этика. В 5 томах. М., 2004.
2. Аристотель. Сочинения в 4-х т. Т. 1. — М., 1975.
3. Ванюшин Б.Ф. Эпигенетика сегодня и завтра. Вавиловский журнал генетики и селекции / Б. Ф. Ванюшин. — 2013, Том 17, № 4/2 — С. 805–832.
4. Липтон Брюс. Умные клетки: Биология убеждений. Как мышление влияет на гены, клетки и ДНК: перев. с англ / Брюс Липтон. — М.: ООО Издательство «София», 2013. — 224 с.
5. Сеньков О. Гены, которые мы меняем / Олег Сеньков // В мире науки № 11, 2008. — С. 50–59.
6. Тайлор Э. Б. Первобытная культура / Тайлор Э. Б. — М., Соцэкгиз, 1939. — С. 15.
7. Waddington, C. H. 1953. Epigenetics and evolution. Symp. Soc. Exp. Biol 7:186–199.
8. Eislers Handwörterbuch der Philosophie. — Berlin, 1922. — S. 356.