

SOCIOCULTURAL SPACE: LOOKING INTO THE FUTURE

The goal of the article is to study the influence of environment, to which a person belongs, on the formation of his genetics through the worldview and culture, based on the latest scientific approach – epigenetics. Research **methodology** consists in application of culturological analysis, which has allowed integrating methods of scientific cognition for studying a man from the viewpoint of his inner world, the mechanisms that form and regulate his life, character, thinking, behavior and culture in interrelation with the nature and society. The **scientific novelty** of work consists in grounding of interrelation and interdependence of a society, man and nature, the correlation of nature, man and culture in its evolution and biological and social factors in human and social development. **Conclusions.** Culture plays a leading role in the transformation of socio-cultural environment and formation of social and cultural development of a man, who can realize his creative potential owing to the knowledge about his own nature.

Keywords: socio-cultural environment, man, society, worldview, culture, epigenetics, environment.

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Соціокультурний простір: погляд у майбутнє

Мета статті полягає у дослідженні впливу навколишнього середовища, в якому перебуває людина, на формування її генетики через світогляд й культуру на основі новітнього наукового підходу – епігенетики. **Методологія** дослідження полягає у застосуванні культурологічному аналізу, який дав змогу інтегрувати методи наукового пізнання для вивчення людини з погляду її внутрішнього світу, тих механізмів, які формують і регулюють її життя, характер, мислення, поведінку та культуру у взаємозв'язку з природою й суспільством. **Наукова новизна** роботи полягає в обґрунтуванні взаємозв'язку й взаємозалежності соціуму, природи й людини, співвіднесенні природи людини та культури у її еволюції, біологічного та соціального в розвитку людини та суспільства. **Висновки.** Культура відіграє провідну роль у трансформації соціокультурного простору та формуванні соціокультурного розвитку людини.

Ключові слова: соціокультурний простір, людина, суспільство, світогляд, епігенетика, навколишнє середовище.

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Социокультурное пространство: взгляд в будущее

Целью статьи является исследование влияния окружающей среды, в которой находится человек, на формирование его генетики через мировоззрение и культуру на основе новейшего научного подхода – эпигенетики. **Методология** исследования состоит в применении культурологического анализа, который позволил интегрировать методы научного познания для изучения человека с точки зрения его внутреннего мира, тех механизмов, которые формируют и регулируют его жизнь, характер, мышление, поведение и культуру во взаимосвязи с природой и обществом. **Научная новизна** работы состоит в обосновании взаимосвязи и взаимозависимости социума, природы и человека, соотношении природы человека и культуры в ее эволюции, биологического и социального в развитии человека и общества. **Выводы.** Культура играет ведущую роль в трансформации социокультурного пространства и формировании социокультурного развития человека.

Ключевые слова: социокультурное пространство, человек, общество, мировоззрение, культура, эпигенетика, окружающая среда.

Introduction. The level of development of the society, its social structures, ideological components, beliefs and views, supported and recognized by the society, form a sociocultural space, in which a human lives and develops. In the era of crisis and changes, the sociocultural space is a subject to transformations. Our society is at such period now: all areas of its life, social and political institutions and cultural values are radically transforming. In this regard, the inseparable relationship of a person, nature and society and a leading role of culture in their evolution are increasingly discussed in various scientific fields. Culture is a powerful regulator of all social changes of society and its value orientations as it produces a certain system of values in the sociocultural space, forming the moral basis of society and its priorities, directly affecting human consciousness, his thinking, needs and ways of interacting with the world, qualitatively changing a man and society. Due to this, in modern sociocultural space there is a growing interest to a human, his nature and uniqueness, and there is a concept that the environment affects a human and his genetics and shapes his culture.

Analysis of the recent researches and publications. The recent studies indicate that social processes in society are more often examined based on understanding the biological patterns. The various studies of B.F. Vaniushyn, M. V. Zhulkov, M. A. Kamenska, V. P. Kaznacheev, B. Lipton, Ch. Lumsden, I. Prygozhyn, V.M. Sheiko, P. Shporko, etc. talks about the anthropological turn in scientific knowledge. A human appears to be an active participant in the evolutionary process and a controlling factor of the Universe evolution, a harmonious part of the nature and a complex self-organizing and self-regulating system. According to E. Wilson and Ch. Lumsden [15], who introduced the concept of genetic and cultural coevolution, the culture directly affects the selection of biological material and is affected by it as well. In addition, the scientific studies [3; 10–13] actively discuss the question of the leading role of the human environment in its evolution and genetics and the interconnection and interdependence of a society, nature and human.

Purpose of the study is to consider the influence of the environment, in which a human lives, on the formation of his genetics and sociocultural space through the worldview and culture.

Presentation of the main material. The idea of a certain human creativity, his natural ability to transform himself and the world around has been expressed since ancient times in various myths and works of researchers and philosophers. With the beginning of the technological revolution era the scientific researches were focused mainly on perception of the external, material world, and being a part of this material world, a human was studied primarily as a biological entity or as a part of social studies.

The changes happening now in science in a certain way correlate with the extant ancient knowledge. The relationship of human with the world, perceived as an organic unity, his evolution and nature is now studied widely and thoroughly [5; 13]. For example, the beginning of the XXI century was marked by a grand scientific achievement – the successful deciphering of the human genome. The genomes of many other organisms, more primitive compared to human, were deciphered as well. It was found that the number of genes in a mouse and a human is approximately the same [8, 61–64].

However, the achievements in molecular biology are exposing more questions than answers. If a human and mouse have almost equal number of genes, by means of what do they differ from each other? What triggers genes? Why do they work? Why are they active in one cell and inactive in the other? Is a person able to affect genes and change the information contained in a DNA molecule?

Studies in genetics, ecology, ethology, sociobiology, and neuro and information biology to some extent support the views of ancient scholars on the natural ability of a human to transform his own nature. They indicate that the biological characteristics of a human and his genetics directly depend on his thinking and worldview, lifestyle, sociocultural environment and beliefs and views produced in this environment [1; 4; 6; 14; 16].

Research in a new scientific field – epigenetics – gave us the opportunity to look at a human from the point of view of the inner world, the mechanisms that form and regulate his life, behavior, character, thinking and culture [2; 8; 14].

The term “epigenetics” was introduced into the scientific usage in 1942 by a prominent British geneticist Conrad Waddington, as a derivative from “genetics” and “epigenesis”. “Epi” is a Greek word for “over”. Therefore, epigenetics is actually the “over-genetics” [2; 8]. It studies the mechanisms regulating the activity (expression) of genes, not associated with the changes of the DNA structure.

The epigenetic studies stated that in addition to genetic mechanism of transmission of hereditary information from one generation to another there is also an epigenetic mechanism, by which changes at the gene level occur [8; 9]. According to the epigenetic findings, the environment plays a major role in the activity of certain genes. Biological and genetic processes in the human body are directly caused by interaction with this environment, and a human is able to influence his biology.

Epigenetics confirms that not the DNA contained in the nucleus, but the environment determines the actions of a cell [8, 68]. The information flow, which controls the living matter, starts with environmental signals that affect the activity of genes, and then transforms into the biological reactions of the body, passing through the cell membrane, which acts as both cell skin and brain. And this flow of information is no longer considered to be unidirectional [5; 9, 235].

According to B. Lipton, a molecular biologist, the genes are only the molecular “drawings”, using which a “contractor” builds cells, tissues and organs of a human body [8, 8]. This “contractor” is our physical and energetic environment – in other words, the environment, which is responsible for functioning of the cell. As each cell is guided not by genes, but the information coming from this environment, the same can be said about the human body as a whole. Therefore, due to the information environment and conscious choice, a human, who is more complex system compared to a cell, has the potential to interact with the environment quite consciously. B. Lipton formulates the important conclusion that a human body and consciousness, and therefore life, are directed not by hormones and neurotransmitters controlled by genes, but by what we believe in [8, 22].

Thus, research in the field of epigenetics shows that the environment, experience, which a human acquires during the life, leads to molecular changes in genes, which can in turn be passed on to affect their children and grandchildren. So, lifestyle, behavior, physiology and human culture are controlled by perception of the environment, beliefs and views rather than by genes.

In this regard, the theory of dominant of O. O. Ukhtomsky, the eminent physiologist and thinker, is worth noticing [7]. According to his theory, the human nature is arranged in such a way that a human responds to the strongest stimulus, and this reaction supports the entire body. If this stimulus affects a person repeatedly, the response of the body is fixed and a dominant, i.e. a typical response to this stimulus, is formed.

According to O. O. Ukhtomsky, this system (according to the dominant principle) is typical not only for physiological (physical) level of a human, but for psychological (heart) and mental (spiritual) levels as well. He believed that under the influence of the environment (nature, society, individuals, events, internal experiences) a dominant – a certain setting – is formed in humans. This dominant, entrenching in the human mind, directs his behavior, and a human transforms the world in accordance with his dominants. Thus, in his opinion, the society and the person are interconnected – society shapes personality, and personality creates society [7].

According to the theory of dominant by O. O. Ukhtomsky and research results in the field of epigenetics, these continuous settings form certain reactions to certain circumstances or factors through the information influence of the environment and subsequent reflection at the gene level [3; 4; 8].

It is known that since his birth a human stays in a specific information and sociocultural space. In this space certain pictures of worldviews and people are formed; certain beliefs, ideas, behaviors and priorities are established, on the basis of which a human develops a worldview, life, way of thinking, behavior and culture. Therefore, to some degree a human life is run by programs founded and formed in early childhood under the influence of those cultural strata, in which he lives and develops. Society, nature and human are interrelated and interdependent. The condition of one of them reflects the condition of another. According to the findings of epigenetics, these beliefs, ideas and views become dominant in the world perception of a human, stating on his biological condition and, in future, at the gene level [8; 9; 15].

It shall be noted, that evaluating the beliefs cultivated in a particular society, a human is able to understand their positive influence or limitations. Realizing the inadequacy of beliefs, ideas and attitudes developed both in a particular society and the perception of a particular human, he changes everything that surrounds him, changing his life, biology and genetics; that is, a human influences the development of sociocultural space.

Considering the findings of epigenetics, it can be noted that the person's inner world is quite organized, and as a biological structure, a human cannot be studied in isolation from his thinking, consciousness, lifestyle, environment, behavior, culture etc. Human, society and culture are organic parts of nature. The environment contains not only a natural component, which exists independently of a human being and his activities, but also social and material conditions of existence, life, spiritual and moral values, social relations, linkages and relationships of different cultural backgrounds and information space, in which the human is [13–17].

It shall be noted that the characteristic feature of human is the energy and information transforming activity, which transforms human and society being a single unit. The goals and objectives that a human being sets as targets, the scope of his possibilities dictates daily selection of different options of actions and thoughts that shape the way of life, thinking and worldview. The active transformative actions and thinking form a certain sociocultural space. According to M. V. Zhukov, consciousness and thinking have an impact on social reality through their own activity, creating models of future and realizing them through public opinion and activity [3].

It has been proved, that the more cultured a society is, the more civilized a human is and vice versa. Through culture, a human accumulates and reproduces the experience of life, manifested in cultural dimensions. Interacting with the natural world and society, a human feels their effect and influences them through his activities. Thus, culture is a bridge between the human nature and the environment, biological and social, natural and the acquired in the process of life, which leads to human evolution.

This shows that culture as a result of the interaction of nature, human being and society, is created as a result of relationship between people, nature and the Universe. It is as natural as a human is.

In this regard, in our view, it is possible to assume that culture, moral and spiritual values and ideological dominants that exist in the worldview of a single human and society as a whole, form an information and cultural environment in which a human is living. This environment, according to the concept of epigenetics, programs human genes, and in future, this will impact on a biological level [2; 8; 9; 12]. Therefore, the state of human genetics and the genetics of future generations depends on what kind of information human cells receive. So, the human environment is directly shaped by genetics, ideology and culture.

Conclusions. At the beginning of the XXI century, a modern human has the potential to revise his ideas about his own nature and essence and become the perfect self-sufficient and self-regulating system with an infinite capacity for change. However, the nature of these changes depends both on a human and his sociocultural environment, ideas and beliefs recognized in it, shaping his worldview and perception. In any case, “the conceptual future lives in the world of ideas, but its effect and projection on the real life can be measurable as well” [17].

Each generation forms a certain sociocultural space that has its system of values and dominants. In this space, a human is identified as an individual and as a social subject. The individual values developed in the process of activities become collective. Therefore, our beliefs shape our culture and the culture of a society on which, ultimately, the fate of civilization depends.

Not only present, but also future depends on which system of values and dominants will be recognized and developed in a society. If these dominants are aimed at progress, unity, internal development and integrity of a human, interrelatedness and interdependence, the new generations will have much more than now.

The present condition shows that the humankind urgently needs to rethink the conditions of human existence and find new directions of development of a human and society. According to the professor V. M. Sheiko, “the whole system of knowledge about the world, human and society shall be revised. To some extent at this higher stage of development, we have to return to the integral knowledge, philosophy, to a single world order.... We shall form the totality of knowledge, beliefs, cultures, and technologies into a unified system not separated from world and human. We have to start with creating a universal model of a harmonious world. People need to feel their relationship with the surrounding world at the scientific, informative and material levels” [11].

The institute of education is one of the most important social regulators, providing an individual with the opportunity to get knowledge in various scientific fields and to cultivating value dominants in society. Thus, in the XXI century it is important to provide the sociocultural development of a human, who would be able to realize his creative potential by obtaining knowledge of his own nature and the potential to transform the world for the better. It means, “to form global ethics and global responsibility in every person as the principle rules of new humanism for new unified and integrated world” [11]. The mechanism of formation of sociocultural identity will be the responsibility of each individual and his confidence in his own creative power, but it is a topic of a further research.

Література

1. Вагнер В. А. Биологические основания сравнительной психологии / В. А. Вагнер. – Т. 2: Инстинкт и разум. М.: Наука, 2005. – 347 с.
2. Ванюшин Б. Ф. Эпигенетика сегодня и завтра. Вавиловский журнал генетики и селекции / Б. Ф. Ванюшин. – 2013, Том 17, № 4/2 – С. 805–832.
3. Жульков М. В. Социальная реальность в энергоинформационном мире / М. В. Жульков // Исторические, философские, политические и юридические науки, культурология и искусствоведение. Вопросы теории и практики. – 2013. – № 12–3 (38). – С. 70–75.
4. Каменская М. А. Информационная биология / М. А. Каменская; под редакцией А. А. Каменского. – М.: Издательский центр «Академик», 2006. – 368 с.
5. Казначеев В. П. Космопланетарный феномен человека: проблемы комплексного изучения / В. П. Казначеев, Е. О. Спиринов. – Новосибирск: Наука, 1991. – 304 с.
6. Каструбин Э. М. Ключ к тайнам мозга / Э. М. Каструбин. – 2. изд., испр. и доп. – М.: Триада, 1995. – 240 с.
7. Коробкова С. Н. Естественно-научный (физиологический) материализм в России второй половины XIX в. в контексте современных антропологических исканий / С. Н. Коробкова // Вестник Ленинградского государственного университета им. А. С. Пушкина. – 2011. – Т. 2. – С. 105–111.
8. 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.
9. Липтон Брюс. Спонтанная эволюция: Позитивное будущее и как туда добраться: перев. с англ. / Брюс Липтон, Стив Бхаэрман – М.: ООО Издательство «София», 2010. – 576 с.
10. Пригожин И. Порядок из хаоса: новый диалог человека с природой: перев. с англ / И. Пригожин, И. Стенгерс; общ. ред. В. И. Аршинова, Ю. Л. Климонтовича и Ю. В. Сачкова. – М. : Прогресс, 1986. – 432 с.
11. Шейко В. М. Формування основ культурології в добу цивілізаційної глобалізації (друга половина XIX – початок XXI ст.) : монографія / В. М. Шейко, Ю. П. Богущкий. – К. : Генеза, 2005. – 592 с.
12. Шпорк Петер. Читая между строк ДНК. Второй код нашей жизни, или Книга, которую нужно прочитать всем. 2-е изд. / Петер Шпорк.— М.: Ломоносовъ, 2013. – 272 с.
13. Юдин Б. Г. О человеке, его природе и его будущем / Б. Г. Юдин // Вопросы философии. 2004, №2.
14. Eccles John Evolution of the Brain: Creation of the Self. – London: Routledge, 1991
15. Lumsden Ch. J., Wilson E.O. Genes, mind end culture. The coevolutionary process. – Harvard University Press, 1981. – 428 p.
16. Meloni M. Biology without biologism: Social theory in a postgenomic age // Sociology. – Oxford, 2013, Oct. 31. – Mode of access: [http:// soc.sagepub.com/content/ea](http://soc.sagepub.com/content/ea) (Долгов А. Ю. Реферативный журнал «Социология». 2014. № 2 Стр. 126–131).
17. Phillips, D. P., Ruth, T. E., & Wagner, L. M. (1993). Psychology and survival. Lancet, 342(8880), 1142–1145.

References

1. Vahner, V. A. (2005). Biological bases of comparative psychology. Instinct and reason. Vol. 2. Moscow: Science [in Russia].
2. Vanyushin, B. F. (2013). Epigenetics today and tomorrow. Vavilovskij zhurnal genetiki i seleksii. Vol. 17, 4/2, 805–832 [in Russia].
3. Zhulkov, M. V. (2013). Social reality is in the energyinformative world. Istoricheskie, filosofskie, politicheskie i yuridicheskie nauki, kukturolohiya i iskusstvovedenie. Voprosy teorii i praktiki. Vol. 12–3 (38), 70–75 [in Russia].
4. Kamenskaya, M. A. (2006). Informative biology. A. A. Kamenskii (Ed.). Moscow : Izdatelskii tsentr «Akademik» [in Russia].
5. Kaznacheev, V. P., & Spirin, E. O. (1991). Spaceplanet phenomenon of man : problems of complex study. Novosibirsk: Nauka [in Russia].
6. Kastrubin, E. M. (1995). Key to the secrets of brain. Moscow : Triada [in Russia].
7. Korobkova, S. N. (2011). Natural-scientific (physiological) materialism in Russia of the second half of XIX of century in the context of modern anthropological searches. Vesnik Leninhradskoho hosudarstvennoho universiteta im. A.S. Pushkina. Vol. 2, 105–111 [in Russia].
8. Lipton, Bryus. (2013). Clever cages: Biology of persuasions. As thinking influences on genes, cages and DNA. Moscow : ООО Izdatelstvo «Sofiya» [in Russia].
9. Lipton, Bryus, & Bhaehrman, Stiv. (2010). Spontaneous evolution: the Positive future and how there to reach: Moscow : ООО Izdatelstvo «Sofiya» [in Russia].
10. Prigozhin, I., & Stengers, I. (1986). Order from chaos: new dialogue of man with nature. Arshinov V. I., Klimontovich YU. L., Sachkov YU. V. (Ed). Moscow : Progress [in Russia].
11. Sheiko, V. M., & Bogutskii, Yu. P. (2005). Forming of bases of kul'turologii is in time of civilization globalization (second half XIX is beginning of XXI item. Kyiv : Geneza [in Ukrainian].
12. Shpork, Peter. (2013). Reading between the lines of DNA. Second code of our life, or Book that needs to be read to all. Moscow: Lomonosov [in Russia].
13. Yudin, B.G. (2004). About a man, his nature and his future. Voprosy filosofii, 2 [in Russia].
14. Eccles, John. (1991). Evolution of the Brain: Creation of the Self. London: Routledge.
15. Lumsden, Ch. J., & Wilson, E.O. (1981). Genes, mind end culture. The coevolutionary process. Harvard University Press.
16. Meloni, M. (2013). Biology without biologism: Social theory in a postgenomic age // Sociology. – Oxford, 2013, Oct. 31. – Mode of access: [http:// soc.sagepub.com/content/ea](http://soc.sagepub.com/content/ea) (Dolhov A. Yu. Referativnui zhurnal «Sotsiolohiia». 2014. № 2 S. 126–131).
17. Phillips, D. P., Ruth, T. E., & Wagner, L. M. (1993). Psychology and survival. Lancet, 342(8880), 1142–1145.

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