

NININS 2020**International Scientific Forum «National Interest, National Identity and National Security»****ANTHROPOGENESIS AND
THE MODERN INFORMATION SOCIETY**

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klgfr@gmail.com**Abstract**

The article emphasizes that modern civilization is largely successfully developing thanks to scientific and technological progress. In this case, one of the important factors in the anthropogenesis of mankind is the development of science and technology. Anthropogenesis is a part of biological evolution that led to the emergence of Homo sapiens. It is natural that artificial intelligence (cyborg, android) is no longer the only subject of science fiction but is embodied in real scientific projects. The article identifies and characterizes different approaches that study the interaction of man, his anthropogenesis and artificial intelligence. In conclusion, the relationship between human anthropogenesis and the emergence of artificial intelligence (cyborgs) is revealed. The interaction of man and artificial intelligence (cyborg) is the subject of study of both the natural sciences and the humanities. The author shows on the basis of the analysis of various philosophical concepts of anthropogenesis and the information society that modern humanity will quite possibly, moving along the path of biological evolution, take advantage of the technological innovations of modern post-industrial (information) civilization that will help or contribute to human biological evolution. It is possible to assume, relying on the authors of many philosophical concepts, that the next “round” (stage) of evolution will be understood not so much as “anthropogenesis” or “anthroposociogenesis”, but already “anthroposociotechnogenesis”.

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1. Introduction

Talking about the “cyborgization” of modern society is rather complicating and at first glance it provokes many different points of view, debates and discussions. Many scientists, philosophers, psychologists, theologians, and doctors openly “argue” with each other about the subject of this issue of “cyborgization,” each considering it a purely “own” subject matter (Stolyarova, 2000).

But it is safe to say that the “cyborgization” of modern society itself is an area of interdisciplinary research, which involves biotechnology, nanotechnology, cybernetics, medicine, anthropology, sociology, philosophy, and even theology (Schummer, 2009). At least, the issues of human immortality turn out to concern today not only theologians and theologists, but also scientists studying artificial intelligence (cyborgs).

2. Anthropogenesis: Essence and Basic Concepts

Scientists identify the basic concepts of the evolutionary model: labor, game, semiotic, psychoanalytic.

The labor concept of the evolutionary model, the main representatives of which are Engels, Gehlen, Morgan, argue that “work” was the cause of human adaptation to the environment. In their works they tried to prove that a person, adapting to the natural environment, does not change himself, but changes nature itself.

The labor concept was presented by Engels in his work “The Role of Labor in the Process of Transformation of a Monkey into a Man” first published in 1896. Engels argues that “work” is the main condition for all human life, without which human life is generally impossible. This paper describes the sequence of the main stages of the emergence of Homo sapiens (hominization): upright posture as a decisive factor in the emergence of Homo sapiens; the human hand as an organ and a product of human labor; the appearance of articulate speech.

Labor, according to Engels, does not in any way abolish the biological laws of the world, but only transforms the effect of the law of natural selection.

For example, Farby claims that one of the prerequisites for anthropogenesis could be the development of the ability to “grab” monkeys, which contributed to the development of the hand in modern man (Vladlenova, 2010).

The game concept of the evolutionary model, of which Hasing is a vivid representative, shows that a rational man arose thanks to the “game”. In many ways, the “game” was for a person a free, creative form of manifestation of his activity in relation to the world and other people. Of course, according to Heyzinga, the game – as a manifestation of the phenomenon of spiritual culture, is non-utilitarian, that is, in many ways practically useless, but it is thanks to the game, the phenomena of spiritual culture that the human world is formed, different from the world of animals that do not have their own art, religion, mythology, etc.

The psychoanalytic concept of the evolutionary model, justified in the works of Freud, Jung, Adler, shows the influence on a person of such cultural phenomena as “totem” and “taboo”.

The semiotic concept of the evolutionary model, which is substantiated by Levy-Strauss, Derrida, Rosenstokk-Hussi, proves the special role of language as a semiotic means of cognition of the world.

Only with the help or through language can a person know the world around him, and as a “language”, representatives of this concept understand both verbal and non-verbal forms of representing the world (rituals, symbols, kinship systems, etc.).

3. Cyborgization as a Phenomenon of Modern Culture and Civilization

3.1. The interaction of the human body with a machine

In scientific circles, there is a very interesting topic of the interaction of the human body with a machine, even the replacement (transplantation) of human organs with artificial organs, of course, the creation of qualitatively new materials (in particular, a new branch of science – nanotechnology deals with these issues), and, of course, the development of information technologies.

It is safe to say that in many respects the ideas of Russian cosmism influenced the development of the ideas of cyborgization (artificial intelligence), in which Russian philosophers convinced that evolution continues at a new stage in the noosphere (the sphere of the mind).

3.2. The human body has "limitations"

Many modern scientists come to the conclusion that the human body, as a matter of fact, of a perfect organism, nevertheless has certain limitations: not all colors, sound waves can distinguish between the human body, electromagnetic waves, etc., are largely inaccessible to human perception, etc.

Therefore, in 1960, the term “cyborg” was used for the first time by Manfred Kleins and Nathan Klin, which was considered as a result of combining (hybridizing) a biological human organism with electronic (mechanical) components. The reasoning of the authors of this term was initially quite simple and was based on the assumption of the possibility of a longer survival of “cyborgs” on Earth than of Man as a simple biological species.

The authors of this term suggest that the biological evolution of man on Earth will sooner or later continue its development as "biotechnological evolution", allowing one to take into account all the modern innovations of civilization and continue the development of mankind.

Today it is already possible to give examples of “cyborgs” or “cyborgization”: British professor Kevin Warwick was one of the first examples of cyborgs. He had an implantation operation.

The ideas of modern transhumanism and the singularity of the scientific process also contributed greatly to this. All these phenomena sooner or later, but inevitably lead to the creation of artificial intelligence and the gradual cyborgization of mankind.

4. Philosophical approaches studying anthropogenesis and the impact of cyborgization on modern society

4.1. Transhumanism (immortalism)

The approach explains the phenomenon of “cyborgization” with the desire of people to achieve “immortality”; in this case, we are talking about the so-called “digital immortality” or biotechnological immortality.

Immortalism is a belief system based on the desire of people to avoid death. In this case, the introduction of artificial intelligence, the development of “cyborgs” gives modern humanity the opportunity to “defeat death.” Transhumanism is a philosophical concept that supports the use of modern science and technology to improve the mental and physical capabilities of a person, in order to eliminate the negative or undesirable aspects of human existence, such as death, suffering, illness and aging.

One of the followers of transhumanism and the ideas of cyborgization is the American futurologist, technical director of Google, the creator of the University of the Singularity Raymond Kurzweil.

Kurzweil (2015) believes that post-biological intelligence will be “installed” in robots in the same way as software is now installed on our computers. In his extrapolation, Kurzweil believes that rapid stimulation of cyborgization processes can lead to technological singularity as early as 2045.

Cyborgization is the transition from biological evolution to techno-evolution, that is, at a stage that is completely controlled from techno-anthropropic products.

Kurzweil (2015) claims that artificial intelligence can be successfully regulated, for example, biotechnology. He calls not to be afraid of artificial intelligence (cyborgs), but to try to “benefit” from the application of artificial intelligence technologies. It compares that in the 1950s, civil defense exercises were a “threat” to people, people perceived it as a “threat”, and currently perceive a “threat” in the use of artificial intelligence (cyborgs) (Kurzweil, 2015, p. 274).

4.2. Cyberfeminism

Philosophical direction related to the study of cyberspace, the Internet and information technology. The term was first used in the 1990s (Daniels, Haraway, Plant). This direction is characterized by the perception of cyberspace, the Internet, as “special zones” that are free from gender, gender, and even social constructs.

Daniels, a professor at City University of New York, believes that cyberfeminism is a series of theories, practices, and discussion points of view regarding the relationship between gender, gender, and digital space.

American professor, representative of cyberfeminism Donna Haraway, most of whose works, and especially her "Cyborg Manifesto: Science, Technology and Socialist Feminism of the 1980s." devoted to considering the image of the "cyborg" in modern society.

A woman is not something “specific”.

Haraway (1990) writes that a woman is not something specific and there is no category that unites this gender under the concept of “woman”. From the point of view of Haraway (1990), there are only physiological signs that define “a woman”, but “being a woman” is a completely different existential category that is not available in definitions of gender or gender. She fights off her rivals, claiming that a “woman” must always be “feminine,” is there really no “woman” with “muscular energy” in this case, is it possible that all “men” possess “masculinity”, and “men” do not have a certain share of “femininity” (Haraway, 1990).

The border between a man and a woman is alien to a cyborg.

The border between a man and a woman is alien to a cyborg, Haraway writes; therefore, it is necessary in the modern information society to strive not for identity (to be a “woman”), but for “closeness” (common interests, morals, etc.) (Haraway, 1990).

5. Virtual Modeling Methods

5.1. Postbiological virtual modeling

Modeling the cohesive development of society with a departure from biological evolution into a technological-virtual sphere, where a person and the world of life are virtualized to the level of a techno man. Virtual modeling (can be thought of as space-time modeling) allows us to describe nature in four dimensions – in three spatial dimensions and in time. It is quite difficult to describe any biological system (including humans), since they are characterized by: multidimensionality (an infinite number of measurements within the continuum), regulation, the presence of complex spatial forms, nonlinearity, the conjugation of processes at different scales and in different subsystems, plasticity in time (dynamic evolution in time), nonequilibrium.

5.2. NBICS-Convergenceism

Convergenceism connecting the future stage of human development with the improvement of his physicality through the development of nano-, bio-, info-, cognitive- and socio-technologies. This term NBIC convergence has already firmly entered the modern scientific environment, arguing that only the combination of efforts of various scientific disciplines is able to make “breakthrough” actions in science, leading to new (now it is fashionable to say, “innovative” technologies). The authors of this term and NBIC technology are Michael Roko and William Bainbridge, who in 2002 first described its origin and impact on scientific discoveries. NBIC technology is especially interesting for the joint interaction of information technology, biotechnology, nanotechnology and cognitive science. Actually, the term itself arose: N-nano, B-bio, I-info, C-cogno.

In Russia, Alekseeva et al. (2013) pay attention to the inhumanity of the concept of “cyborg”, “android”, “biorobot”, convince us that artificial intelligence does not have emotions and, of course, in no case should be regarded as equal in relation to the human person. Artificial intelligence (cyborg) is necessary when performing certain tasks and in catastrophic scenarios of the development of mankind (Alekseeva et al., 2013).

According to futurologists, NBICS convergence will allow the creation of artificial intelligence, cyborgs, any materials with pre-predicted properties. It will be possible to program genes, which will bring genetic modifications to a new level and much more.

Horgan (2001), an American philosopher and writer, argues that the emergence of NBIC technology will mean the “beginning of the end of science” and the emergence of a new “mega-area” of human knowledge. NBIC technologies will lead humanity to the unification of previously divided, specialized scientific disciplines at a new qualitative level (Horgan, 2001, p. 321).

6. Human attitude to the artificial environment

6.1. Environmental optimism

An approach linking the massive emergence of cyborgs with the development of human adaptive qualities to new environmental challenges. Thanks to cyborgs, as some scientists and philosophers believe, humanity can very well “adapt” to environmental changes or practically “survive” with unrealistic changes in temperature, pressure, etc. for the human body.

6.2. Gender constructivism

The approach connects the emergence of a cyborg with overcoming gender differences, the organization of a new post-gender type of personality. We can say that the source of this theory of “gender constructivism” is the theory of the social construction of reality Berger and Luckman. The main idea of social construction of gender is that each individual can not only perceive gender rules, but also create them himself. That is, applicable to the modern post-industrial (informational) society, the “cyborgization” of the modern society “erases” the boundaries between the sexes and forms a “new post-gender identity” (although it is difficult for many philosophers to call a “cyborg” a “personality”) (Berger & Lukman, 1995, p. 176).

7. Conclusion

For the humanities (psychology, cultural studies, philosophy, history) it is especially important to develop ethical imperatives, principles by which various scientific “innovations” will occur, both technological (technical) and biological, etc.

Of course, it is possible to say that a variety of technical and technological innovations transform the modern life of a person and can very well change not only the surrounding being, but also the own being of a specific person, almost gradually transforming *Homo sapiens* from a biological species into a certain “technological kind”.

But in this particular case, the problem of the identity of the personality of a modern person arises. How and how will a modern person be able to understand that he is a "person"? Is cyborg a person?

7.1. Ethical Imperatives for the Humanities

A modern specialist developing economic strategies and social development of society should clearly be aware that in high-tech society meeting human needs ceases to be an end in itself, justifying any path of development of civilization, and the principle becomes a strategically justified life principle self-restraint of mankind in the name of preserving life on Earth.

7.2. Technological innovations change our lives

The philosophy and sociology of technology presented in engineering education, can help a novice engineer realize the end the meanings of technical development: scientific and technological progress is

not a goal, but a means of improving human life, the task of engineering is not simply changing the world around, and improving it in the interests of life and health person.

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References

- Alekseeva, I. Y., Arshinov, V. I., & Chekletsov, V. V. (2013). “Techno-humans” versus “post-humans”: NBIKS-revolution and the future of man. *Quest. of Philos.*, 3, 12–22
- Berger, P., & Lukman, T. (1995). *Social construction of reality*. Moscow.
- Haraway, D. (1990). *A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century*. Simians, Cyborgs and Women: The Reinvention of Nature (pp. 149–181). Routledge.
- Horgan, J. (2001). *The End of Science: A Look at the Limitations of Knowledge at the End of the Century of Science*. Moscow.
- Kurzweil, R. (2015). *Evolution of the mind*. Eksmo.
- Schummer, J. (2009). From Nano-Convergence to NBIC-Convergence: “The best way to predict the future is to create it” *Governing Future Technologies* (pp. 57–71). Springer Netherlands.
- Stolyarova, O. E. (2000). Cyborg Identity: A Review of Conf. “Cyborg identities” (21–22 1999 October) *Social. and humanity. science. Father and abroad. lit. Ser.* 3, 2 (pp. 45–63). Philosophy: RJ. INION.
- Vladlenova, I. V. (2010). Formation of NBIC-convergent paradigma in modern science. *Pract. Philos.: Sci. J.*, 4, 20–26.