

## **The Idea of the Posthuman: A Comparative Analysis of Transhumanism and Posthumanism**

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### **Abstract**

The article discusses the modern philosophical concepts of transhumanism and posthumanism. The central issue of these concepts is “What is the posthuman?” The 21<sup>st</sup> century is marked by a contradictory understanding of the role and status of the human. On the one hand, there comes the realization of human hegemony over the whole world around: in the 20<sup>th</sup> century mankind not only began to conquer outer space, invented nuclear weapons, made many amazing discoveries but also shifted its attention to itself or rather to the modification of itself. Transhumanist projects aim to strengthen human influence by transforming human beings into other, more powerful and viable forms of being. Such projects continues the project of human “deification.” On the other hand, acknowledging the onset of the new geological epoch of the Anthropocene, there comes the rejection of classical interpretations of the human. The categories of historicity, sociality and subjectivity are no longer so anthropocentric. In the opinion of the posthumanists, the project of the Vitruvian man has proven to be untenable in the present-day environment and is increasingly criticized. The reflection on the phenomenon of the human and his future refers to the concepts that explore not only human but also non-human. Very often we can find a synonymous understanding of transhumanism and posthumanism. Although these movements work with the same modern constructs and concepts but interpret them in a fundamentally different way. The discourse of transhumanism refers to the Cartesian opposition of the body and the mind. Despite the sacralization of technology and the desire to purify the posthuman from such seemingly permanent attributes of the living as aging and death, transhumanism in many ways continues the ideas of the Enlightenment.

For posthumanists, the subject is nomadic and a kind of assembly of human, animal, digital, chimerical. Thus, in posthumanism the main maxim of humanism about the human as the highest value is rejected – the human ceases to be “the measure of all things.”

**Keywords:** posthuman, transhumanism, posthumanism, evolution, digital immortality, cryonics, bio-human, digital subject, nomadic subject, ethics.

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## Introduction

The idea of “the death of man” is considered by us to be a symptom of the crisis of European humanism and, at the same time, it is a core line of philosophical thought throughout the 20<sup>th</sup> century [Rostova 2017]. F. Nietzsche opened up the possibility of human thought penetrating into the places where “the human and God belong to each other” [Foucault 1970, 372]. This affiliation blurs the boundaries between the divine and the earthly, opening the space for the existence of what F. Nietzsche calls *Übermensch* (literary “Superman”). The *Übermensch* is the one who comes to replace God and the human without being neither God nor the human. By proclaiming the idea of the *Übermensch*, F. Nietzsche foretold the imminent death of the human.

M. Foucault writes: “...the death man is the return of the beginning of philosophy. Nowadays, one can only think in an empty space where there is no man anymore. This emptiness does not mean a

shortage and does not require filling the gap. This is just a deployment of space, where one can finally start thinking again” [Foucault 1970, 372]. Following Foucault, we find ourselves faced with the need to answer the questions: “What remains in the empty space, who thinks in it? What or who comes to replace the human?”

The way modern philosophy thinks about the human reflects the whole complex of global problems facing humanity. Environmental threat: how does one change the environment that one has changed beyond recognition? The problem of nuclear self-destruction: what kind of biological species is it that can destroy itself and its habitat? The new challenges of global barbarism (terrorism, vandalism, political populism, etc.) call into question the very existence of human culture itself [Romanenko 2017]. New technologies reveal the unseen plasticity of the human body, questioning the biological predetermination of the sexes, and ultimately reopening the question of redefining what we consider to be the boundaries of the human body in a nonhuman world. The question “What is a human form?” is becoming more actual again. Finally, the success of biomedical technologies, from cloning to cryogenics, calls into question the philosophical discourse about the human that has been defined since the time of Kant’s in terms of finiteness.

The famous final of the Kantian four questions “What is the human being?” is already being transformed into the question “What is the posthuman being?”

In contemporary philosophy, on the one hand, transhumanism and, on the other hand, posthumanism discuss the idea of the posthuman. What is the difference between them?

### **Transhumanism**

As mentioned before, the crisis of humanism is directly linked to the crisis of understanding the subject. The subject as *Homo rationalis* ceases to exist. The human himself is located in the field of deconstruction, along with God, the author, the reader, etc. The human began to be understood not as a concept but as a construct. The view of the future human being from the standpoint of tran-

shumanism is the search for weak components of this construction in order to replace them with more technological components. R. Ranisch and S.L. Sorgner write, “Transhumanism today is a slogan for variety of cultural, political, philosophical or digital movement, promoting techno-futuristic visions about the transgression of human biology” [Ranisch & Sorgner 2015, 12].

Nevertheless, transhumanism is paradoxically anthropocentric because it sees value in the human being himself. Transhumanists’ strategies of human overcoming are outlined by a cataphatic understanding of the attributes of the posthuman and are aimed at either abolishing or strengthening the existing human attributes, “the transhumanistic paradigm should at least reproduce our nature on other bases without losing human beginnings” [Budanov 2013, 25–37].

Transhumanism as a current took shape at the end of the 20<sup>th</sup> century (1), and its main goal is to defeat death and aging. The technology is the backbone of this struggle [Bostrom 2005]. Nowadays this ideology has spread all over the world and offered a lot of issues and ways to solve. Transhumanism is traditionally divided into democratic, libertarian, survivalist, religious, extropianism and singularitarianism. A common feature for all directions within transhumanism is the awareness of the need to overcome the finitude of the human being and to achieve a posthuman (postorganic) form of existence.

Transhumanist outlook is based on modern scientific achievements, although it was influenced by science fiction, in particular, cyberpunk and postcyberpunk (W. Gibson, B. Sterling, D. Broderick and others). The problem of artificial intelligence occupies a special place in transhumanism. Discoveries in the field of research of human intelligence and mechanisms of its work give more and more understanding of possibilities for both development of technologies of weak artificial intellect and potential creation of the Supermind surpassing human brain in the decision of these or those problems. For example, by now “Turing players play with people in intellectual games, create masterpieces, speak different languages, make rational decisions, impose their own beliefs and, imitating a human being, drive

him out of traditional spheres of labor” [Alekseev 2017, 154–188]. In this regard, reflection on the development of weak and strong artificial intelligence is an important topic for scientific research, but it does not directly concern the idea of the posthuman.

Contemporary human being is equidistant from both primates and posthumans, transhumanists believe. He is separated from primates by consciousness, from posthumans by organics. However, even being imperfect, the human is the peak of the evolutionary process, and he can and must interfere in the biological process. These claims are substantiated by the epistemological approach that society in the evolutionary process acquires improved characteristics. In this sense, transhumanism continues Popper’s ideas about the gradual evolutionary development of scientific knowledge, believing that “from the amoeba to Einstein there is only one step” [Popper 1999, 73]. It is within transhumanism that the first projects to modify human beings with the help of technical extensions of their organics reached the stage of practical implementation. Though, it is necessary to remember Russian cosmists, in particular K. Tsiolkovsky with his idea of a radiant era for mankind, where there will be no social shackles and other attributes of today’s reality, as mankind evolves into incorporeal thought forms, which will communicate telepathically [Chizhevsky 1986].

Undoubtedly, this idea is very similar to the transhumanistic project of digital immortality (transferring of consciousness to another medium). In this case, despite the attempt to abolish the materiality of human beings, it is obvious that an anthropocentric skeleton is being observed. What will we transfer to another medium? Consciousness? Personality? How can a person exist outside of the physical experience? What status will this digital personality have?

F. Girenok reveals a different perspective of the problem: digitizing human thinking and combining it with digital thinking lead to the simplification of the human. The transfer of consciousness into the silicon landscape of digitization reduces the human to the corporal. “The human is not caught by the body, because he exists in a turn to himself. And in this turn there are not bodies but visions”

[Girenok 2018a, 53]. The crease of humanity is being straightened out, the fragile consciousness is being broken by digital violence. “The human in digital philosophy is not an organic body, not subjectivity, which does not fit into the numerical world, but a computer and database. The human is no longer a human being but a numerical gap in the world” [Girenok 2018b, 137].

The project of reloading consciousness is similar to the project of cryonics – freezing the body and/or the brain for the purpose of subsequent resurrection. The founder of cryonics R. Ettinger in his book *Prospects of Immortality* analyzes death from various positions and sees no other way for humans as its overcoming. Cryonics in this sense becomes the anthem of the subject. “After awakening, he [old man] may already be again young and virile, having been rejuvenated while unconscious; or he may be gradually renovated through treatment after awakening” [Ettinger 1964]. With his unbridled belief in the value of the subject and his desire to recreate the myth of the human, even after his biological death, Ettinger, overcoming the human, finds himself in the vortex of anthropocentrism. Modifying the body, immortalists imply the value of human personality and seek to preserve and recreate it.

The culmination of the transhumanist concept of the posthuman is a cyborg. The process of cyborgization involves replacing parts of the human body in order to improve and strengthen its properties. M. Clynes and N. Kline in their article “Cyborgs and Space” for the first time introduce the term “cyborg” as “the exogenously extended organizational complex functioning as an integrated homeostatic system unconsciously” [Clynes, Kline 1960, 29–30]. They show the transformation of the essence of human by the example of a human being who traverses the cosmic space but is forced to turn to the functionalities of adding mechanical improvements to his body. Technical imperfection of the biological reveals the very Cartesian opposition of the mind and the body. And the cyborg in this sense (an attempt to win the victory over the body) acts as a construct in the service of the higher plans of humans.

Thus, transhumanism, seeking to transcend the traditional limits of human understanding, is itself influenced by anthropocentric discourse. Ethical issues of interaction of such hybrids (cyborgs) with people who were born in the traditional way and do not have any modifications remain unknown to transhumanists. We suggest calling them biohumans, as opposed to the various potential biological and digital hybrids. If we imagine that all the projects of the transhumanists will be realized, then the question arises as to the status of digital incorporeal subjects, resurrected biohumans, cyborgs and robots in comparison with traditional biohumans. Obviously, such differentiation will reinforce existing economic and class inequalities. The increasing complexity of society's stratification refers to some of the eugenic projects of the recent past, where people's "breeds" have been artificially "improved" by labeling biological characteristics as political, and people with inappropriate biological markers have been discriminated and destroyed.

F. Fukuyama, a critic of transhumanism, raises the very important issue of interference in genetic programs of both humans and animals. Such an intervention can have a fatal impact on the environment, as well as on humanity itself. "The posthuman world could be one that is far more hierarchical and competitive than the one that currently exists, and full of social conflict as a result. It could be one in which any notion of 'shared humanity' is lost, because we have mixed human genes with those of so many other species that we no longer have a clear idea of what a human being is" [Fukuyama 2002, 218]. In this regard, the change of geological epochs and the entry into the Anthropocene epoch is an acknowledgement of the fact that human's influence has already become the dominant factor.

### **Posthumanism**

Posthumanism (2) offers a different concept of the posthuman. "The history of posthumanism has no obvious beginning, middle or end in philosophical thought" [Braidotti 2013], writes R. Braidotti, supporting the fragmentation of concepts in the posthumanist era. Posthumanism is primarily associated with such names as

D. Haraway, C. Wolfe, R. Braidotti, K. Hayles, J. del Val, F. Ferrando, Glenn Mazis and others. Posthumanism can be roughly divided into several categories: new materialism (C. Barad, W. Kirby), critical posthumanism (D. Haraway, R. Braidotti), agent realism (C. Barad), metahumanism (J. del Val, S. Zorzner), postcolonial anthropology (E.V. de Castro, E. Kohn). The cultural aspect of posthumanism is developed by C. Wolf.

Posthumanism inherits the ideas of M. Merleau-Ponty, M. Foucault, J. Derrida, G. Deleuze, F. Guattari and others. The posthumanist worldview is characterized by the rejection of any binary opposition, of any hierarchies. The subject is already understood in the form of bodily flows of various virtualities. The central theme of posthumanism is the idea of posthuman, and this reveals an illusory resemblance to transhumanism.

As noted earlier, the posthumanism tries to go beyond any binary opposition of human – non-human, male – female, culture – nature, humanism – antihumanism. R. Braidotti writes in her book *The Posthuman*: “Posthumanism is the historical moment that marks the end of the opposition between Humanism and antihumanism and traces a different discursive framework, looking more affirmatively towards new alternatives” [Braidotti 2013, 37]. She criticizes humanism, viewing the Holocaust and the Gulag as the extreme points of a humanist manifesto. The apparent deadlock in the humanist worldview in its practical implementation has led to the emergence of antihumanist concepts (“feminism, de-colonization and anti-racism, anti-nuclear and pacifist movements” [Braidotti 2013, 16]).

Posthumanism in this sense diverges from anti-humanism and reveals the crisis of the subject. There is a gradual transition of modern philosophy to nomadic subject. Thus, R. Braidotti comes to the compensatory humanism, where the subject appears to be a complex structure, passing through the stages of “becoming-animal, becoming-earth and becoming-machine” [Braidotti 2013, 66]. R. Braidotti writes: “The displacement of anthropocentrism results in a drastic restructuring of humans’ relation to animals, but critical theory may be able to adjust itself to the challenge, mostly



by building on the multiple imaginary and affective ties that have consolidated human-animal interaction. The postanthropocentric shift towards a planetary, geo-centers perspective, however, is a conceptual earthquake of an altogether different scale than the becoming-animal of Man. This event is sending seismic waves across the field of the Humanities and critical theory... The earth or planetary dimension of the environmental issue is indeed not a concern like any other. It is rather the issue that is immanent to all others, in so far as the earth is our middle and common ground. This is the ‘milieu’ for all of us, human and nonhuman inhabitant of this particular planet, in this particular era” [Braidotti 2013, 81]. In other words, the very notion of subjectivity ceases to be an attribute of the human. Animals are freed from the Cartesian prison of Vaucanson’s duck. The Earth, like the planet on which we all live, finds its voice in the Anthropocene epoch. The virtual merges with reality. The boundaries of understanding the machine, animal, human are erased.

In posthumanism the subject is also fragmented, as in transhumanism, but its fragments are fickle, more complex and, most importantly, diverged from the dominant role of Anthropos (that is how posthumanists call the human in the classic paradigm). In this sense, non-humans (animals, machines, plants) gain agency and subjectivity. The researcher of posthumanism E. Nikitina notes that “such categories as historicity, subjectivity, reasonableness, ability to feel, die, etc., which were reserved for Anthropos for a long time, have opened up to machines, plants, microorganisms, animals and nonhuman in general, letting in what Aristotle placed in the sphere of naked, unreasonable life – ζῷῳ” [Nikitina 2017]. Such strategies of thought give hope for the development of extra-species ethics in philosophy, which extends beyond humans to other living beings.

In this context, a new anthropological turn shifts its emphasis from the usual dominant role of man to other agents and entities that were in the Cartesian tradition on the other side of the binary meaning. The transition to a post-dualist worldview, which characterizes posthumanism, means a revision of the opposition: in gender theory –

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male/female; in post-colonial theory – West/East, etc. The status of such seemingly unshakable oppositions as nature and culture is transformed. “Nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other” [Haraway 2017, 151]. Culture is understood not as opposing and cultivating nature but as part of a single whole, within which complex relationships and interactions take place. “We are in the midlist of webbed existences, multiple beings in relationship, this animal, this sick child, this village, these herds, these labs, these neighborhoods in a city, these industries and economies, these ecologies linking natures and cultures without end” [Haraway 2008, 72].

F. Descola in *Beyond Nature and Culture* shows that the seemingly obvious opposition is a construction that emerged in the age of Enlightenment. The dualism of nature and culture has allowed us to separate the human from the world, and this view has produced many discoveries. However, the evolving knowledge of the world leads to an awareness of its multiplicity, including the multiplicity of cultures. With the advent of new knowledge about human duality, it is more incoherent: “It is more important today to understand that our own culture is only a particular case in the general grammar of cosmologies” [Descola 2013, 108–119].

### **The points of divergence between the two concepts**

Transhumanism and posthumanism are fundamentally different concepts. One way or another, transhumanism continues the idea of the Enlightenment that the human is a point of assembly of bio- and noosphere. In this sense, the conquest of space is a logical continuation of the human influence on the surrounding reality. This reveals a fundamental difference with posthumanism, which speaks of non-interference in natural processes and cooperation with other “companion species” of living and nonliving nature. Posthumanism does not highlight the fundamental differences between human beings and nature, recognizing the specificity of human reasoning. F. Ferrando writes: “Posthumanism can be seen as a post-exclusivism: an empirical philosophy of mediation which offers a reconciliation

of existence in its broadest significations. Posthumanism does not employ any frontal dualism or antithesis, demystifying any ontological polarization through the postmodern practice of deconstruction” [Ferrando 2013, 29]. Thus, the field of ethics extends to other species. As far as transhumanism is concerned, questions and potential dangers inevitably arise, as transhumanists seek for even greater expansion of hybrid human subjects.

Transhumanism and posthumanism are based on an evolutionary approach. However, transhumanist approach inherits the Darwinist trajectory. In the horizon of this approach, it is assumed that humanity will achieve improved characteristics in its evolutionary development. Today mankind is at the stage of evolutionary development, which allows to interfere in the course of evolution. The potential emergence of new biodigital species inherits, among other things, the principle of natural selection. The representative of critical posthumanism, D. Haraway, referring to the evolutionary approach, has in mind L. Margulis’s concept of symbiogenesis (meanwhile, Russian scientist K. Mereschkowski was the first who expressed such ideas). “The basic story is simple: ever more complex life forms are the continual result of ever more intricate and multidirectional acts of association of and with other life forms” [Haraway 2008, 31]. The symbiosis is the main evolutionary process, as opposed to natural selection.

To be an organism is to be a “the co-opting of strangers, the involvement and infolding of others into ever more complex and miscegenous genomes... The acquisition of the reproducing other, of the microbe and the genome, is no mere sideshow. Attraction, merger, fusion, incorporation, co-habitation, recombination – both permanent and cyclical – and other forms of forbidden couplings, are the main sources of Darwin’s missing variation” [Margulis & Sagan 2001, 10–12]. It should be noted that, in our view, transhumanist projects are based on the position of Darwinist evolutionism and become the embodiment of neo-Eugenic principles.

Despite the fact that posthumanism and transhumanism use similar terminology (posthuman, cyborg, technology, etc.), they put

different meanings into the concepts used. As was mentioned above, the cyborg for transhumanists is a technological subject, which is maximally modified in favor of abandoning biological but at the same time extremely concentrated in the space of anthropocentrism. For posthumanists, particularly D. Haraway, author of *The Cyborg Manifesto*, “a cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction” [Haraway 2017, 5]. The cyborg is a point of assembly of technological and organic, mythical and social. This is what we are becoming, and what we already have in part.

Transhumanism is always directed to the future and proceeds from the premise of human biological imperfection, which must be overcome. Posthumanism also looks into the future, but it includes the present as well. The main imperfection of human is not the biology of human being, but the psychological fixation of human on himself. Posthumanism proposes to broaden the understanding of subjectivity. “By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism – in short, cyborgs” [Haraway 2017, 7].

However, the point of convergence between the two theories is the hope for technological progress. In transhumanism, technical features acquire sacral features. Technology is seen as something that will liberate humans from the shackles of biological. Thus, the biohuman, considered as a weak and intermediate form of the posthuman, is rejected. Returning to the scientific basis of transhumanism, it is necessary to designate a platform that accommodates the achievements of modern science and allows predicting the future of humanity. It is about the NBIC convergence, namely the fusion of nano-, bio-, info-, cognitive technologies. According to such transhumanists as Perry, Kurzweil, Naam, Yang and others, NBIC convergence is a way to achieve stunning results in human modeling in the future. Posthumanist discourse is not so techno-optimistic. Posthumanism attaches great importance to technology and machines as agents, placing them on a par with biological ones.

However, posthuman overcoming human boundaries should not lead to a piety before technology.

### **Conclusion**

Certainly, different temporal and conceptual vectors of transhumanism and posthumanism entail different issues and, first of all, issues of ethics. Transhumanism, aimed at “external extensions,” establishes a hypothetical set of digital and biomodified subjects whose relations with traditional biohumans are not clear.

Transhumanist ideas are imbued with the desire to achieve the posthuman era. However, the question of what is the human remains open. “Transhumanism’s advocates think they understand what constitutes a good human being, and they are happy to leave behind the limited, mortal, natural beings they see around them in favor of something better. But do they really comprehend ultimate human goods?” [Fukuyama, 2009]. This quest, besides being contradictory as we noted above, can be dangerous. We are not able to predict the immediate, not to mention remote, consequences even of the slightest change in the genome.

Posthumanism aimed at “inner extensions,” namely, the extension of the understanding of subjectivity and the blurring of the figure of *Anthropos* (the human in his classic sense). Posthumanism is post-anthropocentrism, post-dualism and post-humanism [Ferrando 2013]. In contrast to transhumanism, posthumanism denies the superiority of the human being and considers its task to liberate the formerly oppressed, which determines the attention paid in posthumanism to the rights of women, previously vulnerable social groups, animals and, in general, any form of living beings. Posthumanism has no place for the ideal of the human and the posthuman, nor for hierarchy. Such a strategy gives rights to the previously disenfranchised, but is not it a marker of the approaching end of humanity? The deconstruction of the concept of human exclusivity may be followed by the end of the human being in general.

The review of the role and status of the human has long been taking place in philosophy. Legitimization of interference in the

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biological origin of human as well as justification of deconstruction of the social nature of human strengthen their position. Today, the human ceases to be a monument to himself, which means a turn to a new anthropology.

#### NOTES

(1) The term “transhumanism” was coined by biologist J. Huxley (1957). Ideas about the new transhumanist society were developed by F.M. Esfandiary, E. Drexler, immortalist R. Ettinger, as well as transhumanism was reflected in science fiction. This philosophical trend is connected with the names of H. Moravec, M. More, N. Vita-More, R. Kurzweil, D. Pearce and others. It was formed as an ideology in 1998, when N. Bostrom and D. Pearce established the World Transhumanist Association (Humanity+).

(2) The term “posthumanism” was first used by I. Hassan in his work *Prometheus as Performer: Toward a Posthumanist Culture?* (1977). The concept of post-humanism was formed in the 1990s by such authors as D. Haraway, C. Hales, R. Braidotti and others. Posthumanism includes various aspects of postmodernism, technology, poststructuralism, feminism and postcolonial studies. Despite the fragmented nature of this philosophical concept, a common feature is the trend toward deanthropologization of discourse but without an emphasis on modifications of human biology.

#### REFERENCES

Alekseev A.Y. (2017) Turing Test: 66 Years later. In: *The Philosophy of Artificial Intelligence* (pp. 154–188). Moscow: IIntell (in Russian).

Bostrom N. (2005) A History of Transhumanist Thought. *Journal of Evolution and Technology*. Vol. 14, no. 1, pp. 1–25. Retrieved from <https://nickbostrom.com/papers/history.pdf>

Braidotti R. (2013) *The Posthuman*. Cambridge, UK: Polity Press.

Budanov V.G. (2013) Quantum Synergetic Anthropology and the Problems of Artificial Intelligence and Transhumanism. *Rus-*

*sian Journal of Philosophical Sciences = Filsofskie nauki*. 2013. No. 9. pp. 25–37 (in Russian).

Chizhevsky A.L. (1986) *The Theory of the Space Eras*. In: Tsiolkovsky K.E. *Dreams of Earth and Space*. Tula: Priokskoe Pub. (in Russian).

Clynes M.E. & Kline N.S. (1960) *Cyborgs and Space*. *Astronautics*. September 1960, pp. 26–27, 74–76. Retrieved from <https://scribd.com/doc/2962194/Cyborgs-and-Space-Clynes-Kline>

Descola F. (2013) *Beyond Nature and Culture*. Chicago: University of Chicago Press.

Ettinger R. (1964) *The Prospect of Immortality*. New York: Doubleday. Retrieved from [https://www.cryonics.org/images/uploads/misc/Prospect\\_Book.pdf](https://www.cryonics.org/images/uploads/misc/Prospect_Book.pdf)

Ferrando F. (2013) Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations. *Existenz: An International Journal in Philosophy, Religion, Politics, and the Arts*. Vol. 8, no. 2, pp. 26–32. Retrieved from [https://www.researchgate.net/publication/304333989\\_Posthumanism\\_Transhumanism\\_Antihumanism\\_Metahumanism\\_and\\_New\\_Materialisms\\_Differences\\_and\\_Relations](https://www.researchgate.net/publication/304333989_Posthumanism_Transhumanism_Antihumanism_Metahumanism_and_New_Materialisms_Differences_and_Relations)

Foucault M. (1970) *The Order of Things: An Archaeology of the Human Sciences*. London: Tavistock.

Fukuyama F. (2002) *Our Posthuman Future*. New York: Farrar, Straus and Giroux.

Fukuyama F. (2009, October 23) Transhumanism. *Foreign Policy*. Retrieved from <https://foreignpolicy.com/2009/10/23/transhumanism/>

Girenok F.I. (2016) What is the Human? *Filosoftiya khozyaystva*. 2016. No. 6, pp. 165–174 (in Russian).

Girenok F.I. (2018) The Basic Principles of Digital Philosophy. *Filosoftiya khozyaystva*. 2018. No. 6, pp. 133–139 (in Russian).

Haraway D. (2008) *When Species Meet*. Minneapolis: University of Minnesota Press.

Haraway D. (2017) A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth. In: Haraway D. *Simians, Cyborgs and Women* (pp. 149–181). New York: Routledge.

Margulis L. & Sagan D. (2001) *Marvellous Microbes*. Resurgence. Issue 206, pp. 10–12.

Nikitina E. (2017) *Toward Trans-Meta-Posthumanism*. Retrieved from <http://www.academia.edu/36494476> (in Russian)

Popper K. (1999) *All Life is Problem Solving*. Oxford: Routledge.

Ranisch R. & Sorgner S.L. (2015) Introducing Post- and Transhumanism. In: Ranisch R. & Sorgner S.L. (Eds.) *Post- and Transhumanism: An Introduction* (pp. 7–28). Frankfurt am Main: Peter Lang.

Romanenko Y.M. (2017) *Philosophy of Communication. Theoretical and Methodological Aspects*. Saint Petersburg: Saint Petersburg State Polytechnic University Press (in Russian).

Rostova N.N. (2017) *The Expulsion of God. The Problem of the Sacred in Philosophical Anthropology*. Moscow: Prospekt (in Russian).