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# ЛЮДИНА У ТЕХНОСФЕРІ

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## ON THE THRESHOLD OF TECHNOLOGICAL SINGULARITY: HUMAN READINESS TO THE NEW STAGE OF EVOLUTION

**Purpose.** The study is aimed at a philosophical analysis of the state of humanity's readiness for technological singularity, the definition of the concept of postbiology and the investigation of ways to bring the population (in particular, the Ukrainian one) to a new, qualitatively higher level of existence. **Theoretical basis.** The author analyzes the level of public consciousness and the features of its cooperation with technological world. Due to the inability of most modern people to cope with changes effectively, the author questions humanity's readiness for the postbiological stage of evolution of our species. Based on the analysis of the ideas of authoritative futurists of our time, the author explores the prospects of Ukrainian society in the postbiological future. **Originality.** The author not only analyzes the challenges that humanity faces during its transition to a new type of civilization, but also explores the obstacles that hinder this process directly in the Ukrainian society. The author proves that the ideas of transhumanism and going beyond the human biology should not be postulated without a moral context. In addition, the scientific study proposes a number of projects designed to improve the educational institutions that are responsible for the intellectual and spiritual development of the individual. **Conclusions.** Postbiology can become both, a new qualitatively higher stage of the human species evolution and the collapse of humaneness. Along with overcoming human biology, there will be the destruction of moral guidelines, social and legal systems. In order to prevent total chaos and catastrophe, technological development must be complemented by appropriate developments of new norms that can balance society.

*Keywords:* technological singularity; postbiology; superman; smart-technologies; fall out of time; identity

### Introduction

Industrialization, the formation of mass society, increase in the number of people on the planet and the stereotyping of thinking, which had been observed in the Western world for several centuries, had a negative consequence of the proliferation of nihilistic sentiments and difficulties in the process of awareness of one's identity. A person is gradually dissolving in the mass, losing deep connection with his or her own selfhood, increasingly abandoning self-knowledge and methodically filling the leisure time with the products of the entertainment industry.

In a rapidly progressing society with a parallel decline in the level of cultural development of the masses, a person was losing his or her sense of separateness and created an ever deeper gap between the outer and inner worlds. If earlier a person for centuries has felt his or her importance and has known that he or she had a purpose (whether natural or divine), which he or she has been called to find and implement, then today a person more and more thinks that his or her existence does not have the least value and that he or she can be replaced by a more powerful rival.

Negativity of the modern inhabitant in a global society is also connected with the fact that he or she, having found him or herself on the verge of a collision of new worlds, has felt the loss of all traditional landmarks – religious, philosophical, and even scientific ones, since the pace of development of the latter does not coincide with the pace of the human adaptation to the changes.

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Indifference towards one's own destiny is an inherent trait of the one who has fallen out of time and who becomes incapable of anyhow manifest him or herself or even simply wishing to leave something behind, as this state is aggravating. It should be recognized that time is our vital element; having lost it, we find ourselves without support in a complete irreality or sheer hell. Or in both places at the same time, yearning for time, with the feeling of impossibility to return to it and settle in it, with a sense of dissatisfaction at that it passes there, above, our problems and troubles. (Cioran, 2007, p. 130)

Despite the difficulty of the situation described, I note that the person's fall out of time, a break with traditions and a sense of self-awkwardness compared with the latest computer technologies have the potential to play the role of the stimulus that will make a person to think over his or her own being and attempt to transform him or herself in accordance with requirements of the future. In connection with the rapid approach of the point of technological singularity, predicted by futurologists, it is unacceptable to keep on carelessly blink at the of human vision's mechanization, his or her thoughtless dissolution in technologies, the use of the latter not for self-development and improvement, but solely for the sake of entertainment, dispersal of vital energy to satisfy the immediate desires, drop in the level of education and cultural development of the individual.

Thus, the transformation of the industrial society into the information one, the prospects of achieving the point of technological singularity and the predictions concerning the future of human society are quite relevant subjects of modern scientific and philosophical research, and many thinkers focus the attention of governments and ordinary citizens on the above-mentioned problems. In particular, R. Kurzweil, a futurist and apologist of post-humanistic concepts, conducts a multidimensional analysis of the latter, identifying the prospects and disadvantages of further technological development, and making predictions about the human future in the era of intelligent machines. N. Bostrom, F. Fukuyama, M. Minsky, A. Toffler, E. Drexler, I. Good, A. Clarke, A. Turing, J. Neumann, F. Heylighen, S. Ulam, E. Reid, J. Glad, M. Zimmermann and others, also explore the prospects for embedding the technological innovations into the biological world of human. The idea of technological singularity was also reflected in mass pop culture, in particular in the science fiction works of S. Lem, V. Vinge, W. Gibson, H. Ellison, Ch. Stross, M. Deering, as well as in comics, which today reached a new stage of popularity. Among the Ukrainian thinkers one should emphasize V. Vernadsky, who focused his research on the processes of human achieving a new level of existence, the concept of the noosphere and the prospects of scientific progress as far back as the beginning of the twentieth century.

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## Purpose

Taking into account the above-mentioned the scientific research aims at philosophical analysis of human readiness for technological singularity, the concept definition of the post biology and the study of the ways to bring the population (in particular, the Ukrainian one) to the new, qualitatively higher level of existence.

## Statement of basic materials

Analyzing the formation of the new civilization type, Toffler couple (A. Toffler, & H. Toffler, 2007) notes that the industrial age vestiges regularly showing the obsolescence of its methods, are rapidly passing into history. So, the mass society, conveyor production and corporate giants were symbols of the Second Wave, because at this stage of its development society needed such a way of producing goods. However, nowadays the enterprises producing small consignments of goods that are in demand step forward. This applies not only to the production process, but also to mass media, which today operate in the form of a large number of local channels and are not centralized into the giant television networks. Division also manifests itself in the more private sector, in particular, in a family organization, because the new standard is the nucleus and childless families, single parents, divorced and single people. Mass nature loses its relevance and forces people to come out of their usual state of solidarity and collective irresponsibility.

Our contemporary, facing the destruction of the world once well-known to him or her, finds him or herself in a trap of time in which he or she can neither go back nor confidently move forward. Artificial slowdown of technology research as one of the ways to restore support under the feet of a person does not seem to be an expedient solution to the problem, since, according to Kurzweil (2005), this may lead to the suppression of scientific developments in the underground, to deprive mankind of those advantages that gives the technological development, or to cause oppression by the totalitarian authorities. Moreover, the potential of technologic advance facilitate the increasing activity of scientists in this field, and given the peculiarities of the projected future, the number of people who today inhabit our planet will not be able to fully function (or even survive) without technological support.

In this context it should be noted that the own body of the person also became a significant obstacle on the way to the technologically advanced future: infirm, mortal, unsuitable for extraterrestrial existence and the knowledge of the universe. As a result of a sedentary lifestyle, change in the nutrition system and the peculiarities of the environment, our contemporary is considerably inferior to his robust ancestors in the state of health and the constitution, he or she suffers from diseases that hinder his or her development and spends a considerable amount of time and energy to support such a fragile temple for consciousness, as a human body. The evolution on which nature has been hoping for many billions of years, having brought people to the present stage of development, it is rapidly losing its relevance in connection with the time expenditures it needs. At the same time, the current state of affairs does not allow waiting until a person is uncontrollably transformed into a new kind – only the probably better version of *Homo sapiens*. Instead, technology will create an improved body in the near future. Thus, post-biology is the stage of human development, when his or her mortality will be overcome or made substantially remote, his or her physiological and intellectual abilities will be greatly improved, and his or her possibilities will be supplemented with what we now call supernatural forces.

Significant technological advances today allow us to manipulate DNA, cure diseases, train and improve brain functions, explore open space, use renewable energy from the sun and much

more. Optimistic R. Kurzweil (2006) states that 2020 will be the golden age of nanotechnology. Describing the mechanisms that are embedded in the human body and replace the cells damaged by Parkinson's disease, allow you to hold your breath for a long time, isolate pathogens, etc., the futurologist emphasizes that the limit of human biology was overcome in the early 2000's. R. Kurzweil gives an example of the innovation of Rob Freitas – a nanobrotic red blood cell that can store oxygen. According to research data, the replacement of at least ten percent of the red blood cells of the human body with these robotic respirators will allow a person to swim an Olympic sprint for 15 minutes, or remain under water without the need to breathe air for four hours.

Today it is possible to understand neural signals in the brain, to determine the state of the brain, and train it to improve attention and concentration. This is called a neuro-feedback ...The technology used to read brain signals are called EEG (electroencephalography), or a neurocomputer interface. Neurons inside the brain transmit information electronically and create an electric field that can be measured from the outside from the frequency position. The brain waves can be divided into alpha, beta, gamma, zeta, and delta waves depending on frequency. Depending on the type of wave, you can determine is the brain in calm or is it wanders in thoughts. This type of neural communication can be obtained in real time and used to train the brain to focus, pay more attention to things, cope with stress, and improve mental health.

(Sethi, & Sarangi, 2017, p. 8)

Although today the devices described above are embedded in the human body surgically, in 2020 we will operate such mechanisms that will not only have nanoscale but also be easily introduced into the body to treat and improve our capabilities (Kurzweil, 2006). Given the fact that R. Kurzweil's boundary is almost achieved, I emphasize that today in the pockets of millions of ordinary individuals there is a powerful computer with access to the world's information bases. Now we use the devices that allow us to be transported into virtual reality and fully functioning there, now we are making smart tattoos for tracking the physiological state of our own bodies, now we are "printing" human organs on 3D printers for their subsequent transplant, etc. Thanks to the technology, a person has the opportunity not only to get rid of many diseases, but also in the long run the very concept of mortality. Our biology will be overcome and humanity will come to

existence in a new dimension, to a new stage of evolution. The world, in which the previous generations lived, is rapidly disappearing, and we must change ourselves in order not to remain outsiders. This applies not only to the necessary changes in intellectual and physical development, but also to spiritual perfection, since the emphasis exclusively on the technological sphere of human existence can lead to the mechanization of human outlook and dehumanization of consciousness. Since scientific progress and technologies are not able to independently determine the purpose of their creation and the limits, going beyond which can destroy the human race, research in this area should be conducted in accordance with the universal principles of morality.

What is interesting in this context is that the use of pacemakers, hearing aids, implants, prostheses, or, say, artificial lenses of the eye today does not seem to be anything bigger than the standard procedure used for health reasons. However, all of these technologies are those that allow a person to overstep his or her own biology, increase his or her capabilities and correct the faults that the nature has "made". The modern inhabitants of the technologized society are not afraid of minor modifications of the body, but what happens if a person will lose his or her habitual image? In this context, there are a number of questions that need answers in the eve of technological singularity. So, one should find out where the humanity ends and the cyberneticity begins? Will we be human beings if our infirm body is strengthened by cyber-prostheses? Do we stay human beings, preferring existence in the virtual reality? What will happen to our humanity, if scientific progress will allow the person's consciousness to transport into a computer?

It is extremely difficult to answer these questions without the project of post-human translated into reality, but each person intuitively draws the line, the transition of which will symbolize for his or her the loss of human appearance and transformation into something else. Should this line be the same for all, can anyone independently choose the level of permissible transformations? What happens to society, if fearless people who are positive about the idea of the fusion of biological nature with technology, as a result of modifications of their own bodies will become more powerful than their conservative fellow citizens? Does a new type of social stratification wait for us, where the level of biology will be the limit of gradation? Today it is definitely possible to say only that the modification of the human body will, in one way or another, cause a series of social conflicts, the solutions of which may range from the overall unification of mankind and its entering a new gateway to evolution, to the terrifying predictions of the extermination of human kind by intelligent machines.

Today, the imagination of people is captured by two opposing images of the future. Most people, even if they think about the future, they assume that the world they know will be eternal. It is difficult for them to even imagine a lifestyle that is different from their own. Of course, they admit that everything is changing, but they believe that current changes will not affect their usual way of life, and nothing will happen to the economy and political structure. They confidently expect the future – for them it is

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a continuation of the present. The events of the last time have seriously shaken this self-assured idea of the future. A more pessimistic view is spreading. Many people who are accustomed to a constant set of bad news, horror movies and nightmares, have finally decided that today's society has no future. For them, the events of Armageddon can be repeated at any moment. The earth is moving decisively towards the final cataclysm. (A. Toffler, & H. Toffler, 2007, p. 254)

A large number of modern people are truly convinced that technological innovations will ultimately lead to the fact that "terminators" will take over the Earth, enslave humanity, or destroy the latter as infirm race. In this context, I would like to note that I am impressed by the position of J. Storrs Hall *The Singularity is near* (Waller, Kurzweil, & Hoo, 2012), who believes that we are producing not just more intellectual but also more moral machines, since when creating we incorporate in them higher moral and ethical standards than those we ourselves have in practice. Thus, today post-biology should not be identified with post-humanism. However, without proper spiritual development, the situation may change.

What humanity really needs to think about is the words of R. Kurzweil (2006) that "this will not be an alien invasion of intelligent machines that come out of the horizon to compete with us, it develops within our civilization, this is the expansion of the power of our civilization". Despite the fact that we ourselves are the cause of the new civilization emergence, an analysis of the current state of affairs indicates our unreadiness to technological singularity. We are so limited by the artificial, fossilized frames we have been dragging for many centuries that it is difficult for us to imagine that our thoughts, fears, secret desires and whims of the subconscious mind humiliating human nature will not overshadow future technological innovations, including artificial intelligence. Instead of evolving, conquering new peaks, intellectually and morally developing, we rebel against changes and close our eyes to problems.

It was mentioned above that an individual increasingly feels helplessness and outright backwardness in comparison with exponentially progressive technologies. The concept of human gradually loses the sacred meaning that has been laid in it for many centuries, and biology becomes rather an obstacle than the superiority of our species. The break of the human connection with the inner self, fear, dissatisfaction with oneself and the role in society, further catalyze the person's desire to change, to rise to a new level of existence, to create a hero, the others will be fascinated by. In order to achieve this goal today, a variety of methods are used: starting from the appearance modification to the creation of a new virtual image on the Internet community. By the way, it is due to modern technologies a person has the opportunity to transform himself or herself in a new way and to create the type of personality that, in his or her opinion, will cause respect and interest in both him or herself and others. Similar sentiments have been reflected in the stories about superheroes who are in ever-increasing demand among the consumers of products of the cultural industry. It seems that the reason for the high popularity of this kind of films, cartoons and comics is the need of a man in the saviors, super-people who can

tear his or her out of daily grind, save from the threats never seen before and take the responsibility for the further development of human society. For example, the American company Marvel gained popularity, having created a whole universe of superheroes, among which are the gods, technologically advanced people, mutants with super powers, representatives of alien civilizations, etc. At the same time, one should emphasize that, in spite of the desire of authors and directors to distinguish these superheroes from the human world, our subconscious stubbornly synthesizes their superpowers with primitive images and natural origin in man: for example, the heroes of the comics are Spiderman, Ant-Man, Black Panther, Batman, Wolverine and the like. An interesting interpretation of human duality was also embodied in one of the popular comics today, whose hero is Hulk – an indestructible green giant who coexists in one body with a well-considered intellectual – Professor Bruce Banner. This character combines a natural and technological aspect: on the one hand Dr. B. Banner is an ingenious scientist who studies gamma rays, strives for new knowledge and is not afraid to carry out experiments with his own body; on the other hand, it conceals a monster that embodies primitive instincts, natural wants and reluctance to follow social norms.

According to the follower of C. Jung M.-L. von Franz's doctrine, such a combination of supernatural possibilities and the natural component of human nature is not a coincidence:

Selfhood often takes the form of animals, representing our instinctive nature and its connection with the human environment. (That is why there are so many animals-allies of human in myths and fairy tales). This connection of the Selfhood with all the surrounding nature and even the space probably arises from the fact that every human being has his or her psychic core in some way intertwined with the whole world, both external and internal. (Franz, 2006, p. 210)

The above-described synthesized heroes serve as evidence of the often unconscious desire of a person to find a connection with nature, which is lost as he or she immerses in the technological dimension. Of course, the level of knowledge, opportunities and technological advantages in the life of ordinary people today is difficult to compare with the achievements of most representatives of previous centuries, but this does not mean that this knowledge is sufficient for a promising realization in the 21st century. In addition, I would like to note that despite the fact that the calls for self-knowledge, disclosure of the mysteries of our own existence and the search for answers about the meaning of our existence are traced almost in all philosophical concepts, the gap between the immanent world of man and technological prosiness turned into an insurmountable barrier. It causes the loss of person's greeting benchmarks and a general drop in moral development. On the eve of achievement of technological singularity, the fastest solution to this problem is one of the priority tasks.

Thus, humanity should realize that for a successful transition to a new type of civilization, it will not need supernatural forces of fictional superheroes, but a real improvement of their own

capabilities. And if technology allows us to improve our body, then what can we do with human intelligence and spirituality, whose development is hampered by crisis processes in the field of education? It is clear that this is not the case for technologically advanced countries, which have made considerable efforts to bring the educational process to a qualitatively new, modern level, and those countries that, as a result of their slow development, continue to ignore the process of degradation of the educational system. In particular, Toffler couple states that instead of transforming the social sphere in accordance with the requirements of the modern world, many countries are struggling to fight for the values that have lost their significance:

As soon as agrarian societies of the First Wave try to start or end their industrialization, they feel the need for attributes of national status. Former Soviet republics such as Ukraine, Estonia and Georgia insist on self-determination and require outdated state symbols: flags, armies and currencies that defined the status of a nation during the Second Wave or the Industrial Age. (A. Toffler, & H. Toffler, 2007, p. 268)

At the same time, I would like to emphasize that, according to futurologists, the winners in the global races of modern times will not be those countries that are clinging to the past, but those who can effectively globalize themselves and move to a new type of civilization with the lowest level of internal unrests and contradictions (A. Toffler, & H. Toffler, 2007).

Continuing the analysis of the problem, I would like to note that in particular, in Ukrainian society, the educational issue is really extremely acute, since the younger generation receives uncompetitive skills and knowledge during training. Today, we can observe how the process of acquiring higher education is reduced mainly to the use of theoretical materials in a certain narrow specialization. And if earlier the skills of a poorly educated individual could be used to perform low-skilled mechanical work, then with the development of technologies, the spectrum of professions is changing and society will need highly intelligent, erudite people who can critically think and creatively approach the solution of certain problems. As for humanitarian disciplines, which are either now are taking back seat or are generally excluded from the curriculum, they are irreplaceable in this plan because they increase the general level of erudition, develop and improve analytical abilities, allow us to operate a large number of ideas and concepts, to conduct a critical comparison of them, as well as to make informed forecasts of future developments.

Looking for the ways out of this situation, I will focus on those projects whose realization has the potential to transform the social consciousness of our compatriots. First of all, it is necessary to modify the principles of the work of secondary schools, since most of them kill the child's affection to knowledge even before the transition to the 3rd class. Instead of curiosity a child shows a disgust, boredom and the desire to systematically skip classes. Teachers often require students to learn "textbook truths", condemning at the same time any attempt by the child to engage the teacher in a discussion or try to find an alternative, non-standard way to solve the problem. Accordingly, one should not be surprised that a child is more interested in exploring the world using gadgets, social networks and virtual reality, rather



than listening to often boring teacher sermons. In order to overcome these destructive attractions, school workers should transform their methods of work, focusing them on the support and development of the child's natural desire for knowledge, to use interesting and interactive and game techniques (and this applies not only to the elementary school) during the study, to involve children in a creative solution of problem situations, use of the latest technologies during the studies etc.

An illustrative example of the level of the gap between the real life and that taught in most educational institutions of our homeland are humorous expressions such as "Forget all that you taught before". A specialist who, having graduated from the university, comes to his or her first workplace hears the same. These phenomena are unacceptable and must be eliminated. Thus, increase in the number of practical classes, interesting laboratory works, experiments and individual research projects can greatly diversify the educational process, attract young people to the process of obtaining knowledge and awaken the desire for them to discoveries. Since the level of technology development today allows a person to easily connect to the global network and find the right information in a matter of minutes, it is not the number of studied facts that matters, but the individual's ability to use this data creatively.

In addition, I would like to point out that modern parents and teachers in their work with youth are increasingly raising the issue of overloading the child with information and difficulties with the concentration of child's attention. This is due to the fact that the child from childhood is surrounded by a large number of information sources (both human and technological) that he or she cannot correctly handle due to the lack of appropriate skills. However, full functioning in the information society a priori involves a constant flow of data, according to this one of the main tasks of educational institutions is to help the child to master the techniques of controlling these flows, the ability to filter information and skillfully operate it. It seems expedient to introduce into the educational process a block of disciplines that will raise the level of information literacy of a young person, his or her knowledge of programming processes, work with databases, possession of techniques of protection from consciousness manipulation, etc.

In addition, a strong emphasis in the learning process should be made on the moral and ethical upbringing of the young person (Wesserlová, 2018). Taking into account the pace of globalization and the process of cultures interpenetration, the teaching staffs is required to promote the adoption of the principles of responsible attitude towards nature and cultures, humanism and tolerant coexistence with others, rational use of resources and technologies, fair distribution of goods and information, etc. One of the ways to achieve this goal is to destroy the entertainment industry in the way it exists now. Today it is unacceptable to use gadgets solely as entertainment and thoughtless wasting time using them. Technologies should develop a personality, not primitivize, promote his or her intellectual development, and not dampen it. Despite the fact that we live in the era of the information society and own the unprecedented technological base, today there are a large number of settlements and even countries in the world with a low level of education or without education at all. Many children in the world have no access to education, women are not able to read and write, and legal protection of the population is valid only on paper. Even in developed countries, technology is often used not for the study and realization of human potential, but for escaping from the real world into a virtual reality, for the sake of at least temporary but efficient way of filling the emptiness within human, creating a new Self and overcoming the tragedy of his or her existence (even if the latter is unrecognized). If F. Nietzsche saw the peculiarity of a superman in neither his nor her liberation from burdensome moral norms and the achievement of total freedom, then I

believe that without ethical principles and effective moral orientations, the prospects for building a progressive society of the future are extremely ghastly.

### Originality

The author not only analyzed the challenges that humanity faces during its transition to a new type of civilization, but also explored the obstacles that hinder this process directly in Ukrainian society. The author proves that the ideas of transhumanism and going out of the boundaries of human biology can not be postulated beyond the moral context. In addition, the research proposes a series of projects designed to improve the educational institutions responsible for the intellectual and spiritual development of individual.

### Conclusions

Regardless of whether we want it or not, we are ready for this or not, but humanity is already on the verge of the change. Alvin and Heidi Toffler (2007) emphasize that information civilization has given rise to a new way of life that involves the transition of humanity to the use of renewable energy sources, the transformation of the production process, the widespread introduction of computer technology, the modification of educational and production systems, which, in turn, will also require the introduction of a new code of conduct that reduces standardization, synchronization and centralization. Technological development today in fact has greatly enriched human's routine by raising his or her level of opportunities and expanding once unshakable limits of his or her existence. Our world is a world of technologies and it is not surprising that the latter penetrate not only in our life, but also in our consciousness. However, the problem lies in the fact that the overwhelming majority of ordinary people exists on a rather primitive level and has a poorly developed consciousness, which makes it impossible to reach a new level of civilization's progress. As the analysis shows, today mankind is not ready for a post-biologic future. Nevertheless, the latter is steadily approaching and the task of the world's elite today is to provide programs of intellectual, physical and spiritual improvement of the population of our planet. Incidentally, one of the prospects in this regard may be the technological upgrade of human intelligence.

Summarizing, I would like to note that any changes should start from separate individual. We can no longer allow ourselves slow going through our lives and wait until a hero emerges, who will save us from the dangers and move into a bright future. In addition, I share the opinion of C. Jung (2006) that philosophical doctrines and religious movements of the past are no longer able to provide actual answers to questions about what awaits us in the future and how we can cope with the rapid changes around. Unfortunately, negativism and the loss of connection with the traditions of previous generations only shatter the consciousness of the individual, pulling the rug out from under him or her. And even through the screen of technological welfare, he or she feels that the world around him or her collapses and the time when he or she could not determine his/her place in it, is constantly approaching. In order to avoid a catastrophe, a person must stop searching for rescuers among religious figures, philosophers, scientists or superheroes of comics, instead taking responsibility for him or herself, looking inside him or herself, building his or her own Self on a reliable basis of personal intellectual and spiritual development. If we strive to build a new, stable society, we should focus not on the thoughtless production of technology, but on its proper use, on raising a person to a new level of self-awareness, on his or her perceiving him- or herself as a free, responsible and creative member of a global society.

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## НА ПОРОЗІ ТЕХНОЛОГІЧНОЇ СИНГУЛЯРНОСТІ: ГОТОВНІСТЬ ЛЮДИНИ ДО НОВОГО ВИТКА ЕВОЛЮЦІЇ

**Мета.** Дослідження спрямоване на філософський аналіз стану готовності людства до технологічної сингулярності, визначення поняття постбіологічності та дослідження шляхів виведення населення (зокрема, українського) на новий, якісно вищий рівень існування. **Теоретичний базис.** Автор аналізує рівень суспільної свідомості та особливості її кооперації із технологізованим світом. Виходячи із нездатності більшості сучасних людей ефективно впоратись зі змінами, автор дослідження ставить під сумнів готовність людства до постбіологічного етапу еволюції нашого виду. На основі аналізу ідей авторитетних футурологів сучасності автор досліджує перспективи українського суспільства у постбіологічному майбутньому. **Наукова новизна.** Автором не лише проаналізовані виклики, які стоять перед людством під час його переходу до нового типу цивілізації, а й досліджені ті перешкоди, які гальмують цей процес безпосередньо в українському суспільстві. Автором доводиться, що ідеї трансгуманізму та вихід поза межі біологічності людини не можуть постулюватись поза моральним контекстом. Окрім цього у науковому дослідженні запропоновано низку проєктів, покликаних вдосконалити навчальні заклади, відповідальні за інтелектуальний та духовний розвиток особистості. **Висновки.** Постбіологічність може стати як новим якісно вищим витком в еволюції людського виду, так і крахом людської гуманності. Разом із подоланням біологічності людини, відбудеться руйнація моральних орієнтирів, соціальної та правової систем. Аби попередити тотальний хаос та катастрофу, технологічний розвиток повинен доповнюватись відповідними розробками новітніх норм, які зможуть збалансувати суспільство.

*Ключові слова:* технологічна сингулярність; постбіологічність; надлюдина; смарт-технології; випадання з часу; ідентичність

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## НА ПОРОГЕ ТЕХНОЛОГИЧЕСКОЙ СИНГУЛЯРНОСТИ: ГОТОВНОСТЬ ЧЕЛОВЕКА К НОВОМУ ВИТКУ ЭВОЛЮЦИИ

**Цель.** Исследование направлено на философский анализ состояния готовности человечества к технологической сингулярности, определение понятия постбиологичности и исследование путей вывода населения (в частности, украинского) на новый, качественно более высокий уровень существования. **Теоретический базис.** Автор анализирует уровень общественного сознания и особенности его кооперации с технологизированным миром. Исходя из неспособности большинства современных людей эффективно справиться с изменениями, автор исследования ставит под сомнение готовность человечества к постбиологическому этапу эволюции нашего вида. На основе анализа идей авторитетных футурологов современности автор исследует перспективы украинского общества в постбиологическом будущем. **Научная новизна.** Автором не только проанализированы вызовы, стоящие перед человечеством во время его перехода к новому типу цивилизации, но и исследованы те препятствия, которые тормозят этот процесс непосредственно в украинском обществе. Автором доказывается, что идеи трансгуманизма и выход за пределы биологичности человека не могут постулироваться вне нравственного контекста. Кроме этого, в научном исследовании предложен ряд проєктов, призванных усовершенствовать учебные заведения, ответственные за интеллектуальное и духовное развитие личности. **Выводы.** Постбиологичность может стать как новым, качественно более высоким этапом в эволюции человеческого вида, так и крушением человеческой гуманности. Вместе с преодолением биологичности человека, произойдет разрушение нравственных ориентиров, социальной и правовой систем. Чтобы предупредить тотальный хаос

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и катастрофу, технологическое развитие должно дополняться соответствующими разработками новейших норм, которые смогут сбалансировать общество.

*Ключевые слова:* технологическая сингулярность; постбиологичность; сверхчеловек; смарт-технологии; выпадение из времени; идентичность

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