The Educational Model of Transhumanism in the Context of Society Digitalization

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ABSTRACT

The article discusses the basic postulates and educational programs of transhumanism as a technological direction, focused on the near future, given clear parameters. At the present stage, supporters of transhumanism simultaneously carry out the tasks of promoting their teachings, expanding the circle of supporters and sympathizers, including through educational projects: educational programs, summits, leadership extensive, webinars, family education. Institutionally, for over 12 years, a project of a private commercial "elite" university has been implemented: the University of the Singularity and its "chapter" branches in different countries. Graduates of educational programs demonstrate the ideological unity of "exponential thinking", the identical perception of the past of humanity, clear attitudes towards vision of the future (the era of the Singularity), forms of communication, ethical standards, methods and models of educational programs. Digitalization, among other modern technological world trends, plays the role of an integrating methodological and organizational principle, which, according to supporters of transhumanism, will attract more creative, influential and intelligent leaders and businessmen to it.

Keywords: digitalization, educational model, transhumanism, exponential thinking, the transhuman

1. INTRODUCTION

Relatively recently, a new paradigm has emerged in which the main factor influencing, including the training and education of a person, it proclaims a basic transformation of his nature at all levels simultaneously. At the physical level, through genetic engineering, nanotechnology, implants. On the psychic, with the help of designer drugs, genetic engineering, artificial intelligence, computer-man-network communications, as well as on the deeply spiritual through the influence of the above technologies, as well as the exclusion of such phenomena from human being as death, natural birth, aging, suffering (pain). Such a paradigm is realized in transhumanism. In this article, we will pay attention to educational programs, methods, and the interpretation of the nature of man and society that are promoted by transhumanists, including through individual educational organizations (Singularity University, SU). The content of the programs and research areas in SU confirm this global goal: the irreversible transformation of man and the transition to a new model of education, where the system of classical schools and universities will lose all meaning.

Given the abundance of work on transhumanism and its impact on various aspects of life, one finds, surprisingly, a slight interest in the analysis of the educational programs of transhumanism advocates themselves. A modern "natural" man with the help of exponential thinking must go to the stage of the transperson. The ultimate goal of transhumanism is the transition from transhuman to posthuman through technology. The post-man is thought of as something "qualitatively different and superior to man" an "ideal being". In the article we highlight some interesting trends in the development of educational practices. So the transhumanists themselves are not at all limited to the search for scientific discoveries, methods that allow creating ways of perceiving the world that are identical to the person, or technologies for healing (curing the body of diseases), but they strive to create an ideology that positively attaches people to qualitative changes, a transformation that is called "improvement".

Improvement itself is any change with the help of scientific technologies: any mutation, new experience or new product that is evaluated positively if it goes beyond human capabilities (see S.V. Sokolovsky, who calls such an attitude "excessive techno-optimism and the absence or underdevelopment of criticism of their own ethical principles and foundations .... The emphasis is on the development and convergence of the so-called NBIC technologies (social sciences in the work of transhumanists, with the exception of debates on ethics, are rarely accepted in calculation) "[13, P.76]). From here the following hypothesis develops. If a methodology for direct programming of competencies at the genetic level is created and a person becomes technically easy to train for specific skills and at the same time becomes completely incapable of perceiving anything else, then such a technique should be welcomed, since it is easy to

substantiate economically as well: no long training is required , a person is literally born for a given profession / skills. The individual will automatically disappear the problem of choice, because he is not capable and does not want to do anything else. From here it is realistic to set an accurate forecast of demand, labor market planning, and then the entire stratification system of the society of the future. Each in its place and no chance, and again, most likely no geniuses and spontaneous discoveries.

Ideologists of transhumanism are actively implementing educational programs of various levels of complexity, cost and format of training: live communication (forums, summits), online courses, cases, webinars. However, this diversity has something in common, a certain principle of perception of the world and a vision of the future exclusively in the context of the development of the latest digital technologies, especially NBIC technologies.

2. MATERIALS AND METHODS

During the writing of the article, the works of the largest ideologists of transhumanism were analyzed: R. Kurzweil [11, 12], N. Bostrom [6], W. Bainbridge [19], D. Pierce [2], W. Windge [17] and others. We studied the interviews of transhumanists, graduates and supporters of the University of the Singularity (interviews by R. Kurzweil, N. Bostrom, J. Kolesnikov, S. Leonard). A critical analysis of transhumanism is contained in the works of F. Fukuyama [3], J. Habermas [4], V.V. Kutyrev [18], S.S. Khoruzhiy [15] and others. S.S. Khoruzhiy writes about "virtualization of society", when the transhuman consciousness cannot perceive the world in unity, but becomes chaotic, limited by a digital format, not connected and deeply anti-human [15]. In a certain sense, N.N.Rostov adheres to a similar point of view, emphasizing that from the point of view of philosophical anthropology, the trend of Western science and philosophy, as well as transhumanism in particular, is moving toward increasingly radical anti-anthropocentrism. "The number of those sympathizing with the idea of human exclusivity is small. A person ... is deprived of ontological privileges and is conceived as part of the whole (= nature, the Universe, a set of objects, etc.). As a phenomenon, it disappears, i.e. in a philosophical sense dies "[7, p. 68].

Transhumanists insist on developing the Big Data methodology in science and education of the future, NBIC technologies, the latter are declared universal and positive, and most importantly, practical (easily converged with business). Critics note a nuance: attracting ready-made talents, geniuses, leaders in different sectors of business and politics and further reformatting them in the interests of transhumanists, and not the individuals themselves. For example, a separate point in such technological programs is the "new ethics".

According to R. Kurzweil, the methodology of transhumanism itself and the method of teaching is defined by "Exponential Thinking" (see the 2001 essay "The Law of Accelerating Returns") [11], and the notion of "exponential mindset" is used among participants - a new way of thinking, according to the laws of accelerating evolution, the latter makes jerks exponentially, which means that a person is also capable of demonstrating such non-linear progress in his mental creative activity (the speed of acceleration grows exponentially). Exponential thinking is the belief that both technology and the ecosystems themselves are developing evolutionarily exponentially and that is the only way to predict the future of humanity. Earlier, according to R. Kurzweil, the development was linear, and we used to think accordingly - linearly, and he also means to think intuitively, i.e. according to experience. But with the advent of new digital technologies, everything has changed, they are developing not linearly, but exponentially. But in real life, exponential growth (a period of growth or leap) does not last forever. Having adopted an exponential worldview, a person seems to turn off his "immune system" and indirectly, indeed, it reduces stress, but it does not at all reduce the power of destructive consequences if he chose the wrong path. An adequate hazard assessment can help reorient or slow down death. We are invited to choose what S.A. Kravchenko calls riskophilia "a new social type has emerged - a digital risk person whose centrifugal behavior and thinking in terms of numbers contribute to a predisposition to riskophilia" [14, P.53]. So, choosing riskophilia as a fashionable setting, a person agrees and joins the work of transhumanists, the number of supporters is growing, and the future is in some way programmed into a digital script. However, digitalization now has dozens of side effects, "digitalization risks" that greatly depress the person and society as a whole, as well as negatively affect the educational process.

3. RESULTS

In modern transhumanism, both on a worldview level and on the level of presenting oneself in the educational environment, a special educational model should be distinguished, based on the paradigm of exponential thinking as adequate to the level and method of the progressive development of digital technologies (digitalization as the main methodology for the development of technologies and the world today), hence, exponential thinking must be assimilated by business, science and other areas of public life. In education, taking into account the dominance of the market economy over other areas, this is, first of all, the formation of new business projects where educational services are secondary, or they are caused by commercial interest. An interesting question is: how true is the initial (priority) or close convergence of the educational process with business projects or focus on entrepreneurship? Most likely there will be something to sag and degrade, and no one has yet canceled the specifics of the division of spheres: scientific, economic, cultural and types of thinking, respectively, as well as experience: theoretically oriented (and it takes time to build a deep theory or model) and actually practical, profit-oriented in the near future.

One of the first educational platforms for ideologists of transhumanism was the Singularity University, which was initially organized as a non-profit organization implementing the annual 10-week summer program (Graduate Studies Program) through major sponsors, for example, Google, which provided a grant of 1.5 million dollars a year. However, after three years, sponsorship ceased, and SU became a private university, combining the functions of an educational institution, a business incubator and a venture fund. Its founders: the famous American transhumanist, futurologist, inventor and movement guru, Ray Kurzweil, and general director of the X-Prize Foundation - Peter Diamandis. The latter is known as the founder of space commercial tourism. SU itself is located in Silicon Valley (initially based at NASA Research Park, but moved to Santa Clara last year) and positions itself as a university for leaders looking to the future with leading experts from such corporations as NASA, Google , Cisco and others. Singularity University has a branch in the Netherlands, since 2016 in Kiev (SingularityU Kyiv Chapter), since 2017 in Moscow (Singularity University Moscow Chapter). After a series of scandals, in 2020, SU was headed by a new CEO, Steve Leonard, who moved to SU from SGInnovate, a private limited company owned by the Singapore government. S. Leonard explained that "SU ... uses global reach through a network of 8 partner countries and boasts a global community of over 350,000 through membership in 190 chapters and 77 countries" [16].

Russian researchers of elite educational programs attribute the SU format to the category of elite continuing education [see 10].

SU has several types of educational programs. Two of them are advertised in the Russian Federation, including through Skolkovo (GSP – Global Solutions Program and Executive Program).

- The GSP (Global Solutions Program) is a ten-week training program for young leaders. It includes 10 directions: I. Technological areas: 1. Artificial intelligence and robotics; 2. Nanotechnology; 3. Networks and computer systems; 4. Biotechnology and bioinformatics; 5. Medicine and neurological research. II. Resource Areas: 1. Studying the future and forecasting; 2. Politics, law and ethics; 3.Finance and Entrepreneurship and III. Applied areas: 1. Energy and environmental systems; 2. Space and physical sciences.

Program structure: 1st week: deep understanding of the subject area; from the 2nd to the 5th week: report on the interaction and impact of technologies (Participants study today's technologies and their development prospects); from the 6th to the 10th week: development of the project (Project of choice: a report on how the technology will be implemented over 10 years, or a report on which companies or research programs should be launched). The program includes presentations and discussions, workshops, communication of participants and team building on the topics of modern entrepreneurship, innovation and the transformation of society as a whole.

- Executive Programs are for executives, entrepreneurs (cost - 15,000 USD). For 2020 the program is offered 4 times a year: May, September and two in November. The Executive program is a five-day course on convergent technologies, and so called "Ethical leadership." It includes: a practical understanding of the effects of technologies, their impact on the market; access to tools and structures that will help implement changes in their organizations; liaising with other leaders and businessmen; an opportunity to penetrate the development of Silicon Valley. The curriculum consists of interactive and empirical parts, including exponential technologies, transformational practices and global challenges and opportunities, each of which is taught by experts. Students of the program visit the laboratory with 3D printers and scanners, robots, virtual reality headsets, drones and a wide range of software and prototyping tools.

21 experts were identified as experts for 2020, for example, Jeffrey Rogers, Principal Facilitator, Andre Wegner, Digital Manufacturing, Dan Klein Design Thinking, Paul Saffo, Future Studies, Neil Jacobstein, Artificial Intelligence & Robotics, Dr. Suzanne Gildert, Robotics, AI, Raymond McCauley, Digital Biology, Dr. Tiffany J. Vora Vice Chair of Medicine & Digital Biology, Dr. Carlo Van de Weijer, Mobility, Automotive and others. As a successful leader, Rutger van Zuidam is presented with his Odyssey program and blockchains as technologies of digital communities. This is a new type of digitalization implemented at Odyssey.org. Odyssey Hackathon is the world's largest artificial intelligence blockchain and hackathon, held annually in Groningen, the Netherlands (5-day crash courses) [https://www.odyssey.org/].

- Forums, summits, webinars, project activities at SU sites [16].

- Interactive learning, online learning that includes learning resources, classrooms, and expert video content. Online courses on 5 topics. 1. Foundations of Exponential Thinking, 295 USD (12-16 hours). Teaching exponential thinking through knowledge of exponential technologies: robotics, quantum computing, and synthetic biology, with a new set of ethical standards. The remaining topics are 2- and 3-hour courses for 100 USD. For example, How-to-Hack for Kids with Nico Cell, 100 USD, 2-3 hours. Teaching hacker thinking, as well as tips on computer security. Or Symbiotic Systems: Designing an Inclusive Future [16].

- Family education. Expand Your Family's Potential. This form of training is argued for by utilitarian market factors, as well as by the fact that in the global economy "family businesses account for more than 70% of global GDP and more than 85% of startups are funded by family-backed investments" [16].

All of the above types of educational programs include elements of the so-called Future of Learning (GGC-Learning). In SU, the management of educational resources is handled by Aaron Lower is Director, Faculty Development, who is also responsible for SU certification programs for faculty members. He works on increasing the

authority of the SU team in the world. An education reformer, Esther Wojcicki, also works there. Education of the future is focused on:

- Exponential training. This is the widespread introduction of new teaching methods and exponential technologies in education. The rating system should be like in computer games: from scratch and points are awarded for all successful actions. Relevant educational content: knowledge useful in the digital age.

- Micro-learning format. Instead of traditional lessons, lectures with clear subject guidelines, it is proposed to use short training courses on various topics throughout the day (short interactive sessions).

- Strengthening the creative component in teaching through technology. Technology in learning: learning simulations, educational games and educational entertainment. Simulation of learning experience. For example, RoomQuake scales an ordinary classroom into an earthquake simulation.

- Individualized training (classrooms should go by the wayside). The person of the future is mobile and from here must learn at his own independent pace. Training programs are focused on solving specific problems.

- Online education through computers, tablets, phones or smart devices. Training on online platforms using video tutorials and visual teaching methods.

Today, all of the above formats and teaching methods are generally characterized as "unstable," but transhumanists believe that these are costs of the technical imperfection of modern digitalization (and possibly of the person himself?), Which in the future will be solved and improved by artificial intelligence (AI), blockchains , virtual reality (VR) and augmented reality (AR), the Internet of things (IoT) and the modification of a person to a posthuman.

The University of the Singularity opens a "chapter" in different countries. In particular, its graduates and like-minded people have opened such branches in the Netherlands, Ukraine, and Russia.

So in the Russian Federation, a group of SU graduates organized The Singularity University Moscow Chapter (SU MC) in 2017, headed by the director general of InfraFund PBK, Evgeny Kuznetsov. One of the co-founders of the branch, Gene Kolesnikov (in networks he designated his activities in SU as "Just doing God's job"), is a visionary of robotics and technological singularity. In one of the interviews, G. Kolesnikov says the following about Chapter "... the university leadership decided to go global. A concept was identified according to which each graduate can organize Chapter, a non-profit association, a team of like-minded people who are ready to talk about Singularity, find new university partners and make a graduate club in a specific location. Such a club helps to keep in touch with the university and other graduates around the world to solve both their business problems and global social challenges. Chapter always opens in a particular city ... Singularity itself has a clear position: to support those people who have already done something. They are not opposed to talking with someone who has a

good idea, but the whole logic of interaction is not focused on them. The university best helps business representatives and entrepreneurs with their startups who want to expand their mindset, change their mindset, or begin to grow their business exponentially to offer their opportunities to the world "[5].

The article does not have the opportunity to consider separately the views of representatives from SU in Moscow, Ukraine, the Netherlands, therefore, we immediately highlight only general reasons: 1. A positive apologetic view of the use of modern experimental technologies, including in relation to the person; 2. Focus on the Western commercial liberal model of education and doing business, up to cultural linguistic preferences (cosmopolitanism with Western values, Russian national or traditional values are not provided); 3. Eastern spirituality in combination with the Western approach, i.e. practical application of meditation, yoga, interpretation of the sacred world in a technological way; 4. Individual training programs.

4. DISCUSSION

Let us consider the fundamental concept of "exponential thinking". In general, according to the theory of R. Kurzweil, the growth of knowledge and with them the qualitative improvement of scientific achievements (SAI) occur exponentially. However, in a strictly scientific, philosophical sense, how correct is it to call "thinking", in the sense of the way in which our consciousness reflects reality, the way of cognitive activity, as a result of which a thought, a certain idea is born? In this sense, it is hardly possible to prove that mental operations in the minds of transhumanists or those who have trained and learned "exponential thinking" are qualitatively "several times" different from the way other people think "linearly thinking" or think slowly in the present tense. Also, in the meaning of accelerating mental abilities "in geometric progression", here we are still dealing with a metaphor, with imitation, and most importantly - with belief in some kind of task or the possibility of such thinking and confidence in correctly predicting the future.

In transhumanism, in its educational model, the concept of "improvement or re-improvement" is universally used, for example, through NBICS technology, the creation of a "man-machine" system. But how is it understood? In transhumanistic education, this is, first of all, a certain process, a certain way to the ultimate goal - a transhuman, which should please a "natural" person. However, here there is a fundamentally different goal and a different interpretation of human nature and its purpose. So, if in the classical interpretation of man, he is a unique being: free, creative, and this is inherent in him initially, as a potential of personal growth. And in transhumanism, a real person is a step in evolution, which should be further developed with the help of technology, overcoming biological parameters, i.e. genetic transformation, symbiosis with the machine (cyborgs), loading of consciousness, plurality of identities are necessary. In fact, the term "improvement"

no longer refers to the improvement of a person as he is, but more precisely, scrapping, transforming a person into something else.

In the transformation of modern civilization towards the "digital turnaround", when both positive technical shifts and negative risks of digitalization are recorded, due to its extremely complex nature, many side effects appear that affect modern society. The critics of modern digital trends note the fragmentation of society, including due to the fact that "We began to rebuild all cultural meanings and values in relation to the technical world ... nowadays, success in life is largely determined by the individual's adaptation to the digital environment. As a result, young people ... become dependent on digital realities that determine the nature of their behavior, in which the values of novelty begin to prevail. ... thinking is deformed: outside of rooted values, it becomes more primitive and is likened to the functioning of technology" [14, P.50-51]. Add to this the risks of digital freedom "digital freedom risk" associated with increased control over the network and loss of privacy. The ideology of transhumanism in philosophical terms is based on utilitarianism and hedonism, hence the aforementioned attitudes are laid in education. Transhumanism can transform the human market into an even more complex multi-level trading cluster: selling the body, implants, knowledge, identity, levels of freedom, etc.

5. CONCLUSION

To summarize and highlight the basic principles and attitudes of transhumanism in the formation of the future in the light of the digitalization of society:

• Evolutionism, as one of the basic ideological principles of transhumanism, is used to explain the development of society and the future in the context of the transition from blind evolution (case-dependent) to "controlled" evolution using technology.

• Progress and innovation argue against all prohibitions or inhibitions of technology adoption. Progress legalizes the digitalization of all spheres of life and people, before universal inclusion in a single computer network with a single center. For innovations, look up an interesting article by A.A. Dydrov, V.S. Neveleva "The speed of introducing innovations today is high ... whether a peculiar contradictory situation has arisen when, on the one hand, innovations appear as a universal means of moving forward, on the other hand, the understanding of what innovations are is reduced because they are unambiguously associated with scientific and technological progress, with the sphere of engineering and technology" [1, P.35–36].

• Randomization as one of the principles of the approaching future. Traditionalism, conservatism, stability are a thing of the past, as is the very understanding of human nature and the world. Transhumanists insist on mobility, the constant variability of the future, hence the eternal training / retraining, the change of profession and

status for most people, the change of ethical attitudes, multiple self-identification up to digital consciousness and its copies (many personalities).

• Eugenic approach to human transformation (liberal eugenics), starting with the "designed children" reproductive revolution and then a clear gradation of educational programs according to quotas in accordance with the "potential" of the transhuman and further posthuman, where ordinary people (abandoned modifications) will become the lower class with a low level of all "necessary" characteristics. A posthuman is a creature with irreversible modifications, and here it may turn out that communication will be impossible [see 3, p. 124].

• Commercialization of all processes in education on the principle of a new utilitarian ethics of transhumanism. N. Bostrom, J. Hughes, D. Pierce Are working on the concept of a new ethics. In 2004, The Institute for Ethics and Emerging Technologies (IEET) was established.

Currently, the educational model of transhumanism advocates is built on increasing convergence of business structures and educational platforms in favor of the former, i.e. the university, as a classic independent community of teachers and students serving knowledge and science, is becoming a thing of the past with a free choice of scientific topics and the way they are presented. Perhaps the modern vision of transhumanism is only a logical consequence or an attempt to maintain the monopoly of a market economy in the direction of preserving its real implementation in the world community (the formation of a single human community on the principle of a network in a single state with a single government, Singleton, as N. Bostrom calls it). In general, the digitalization of education plays a dual role in transhumanism. Firstly, it forms a certain general format for the interaction of all social structures in a single digital methodology, through a computer network. Secondly, it helps to carry out the graduation of the young generation, to identify, transform leaders, and through educational ideological programs to include them in a single field of like-minded people who are building a specific technological future on the eve of the era of the Singularity.

Another aspect that is manifesting itself negatively today is the transformation of digitalization into a digital bureaucracy of reports, imitation of scientific activities in the network, imitation of the educational process, and in general, imitation of life and the improvement of society as such. As written by O.N. Yanitsky "... a hybrid and rapidly changing world changes personality, transforming it from an agent of social transformations into an" operator "(push-button person), acting according to algorithms designed by the creators of this world .... transferring an increasingly large part of economic and social functions to "smart machines ", a person thereby obeys them" [8, p.16]. So, the question arises: is this process really irreversible and necessary, and are we ready, or are people doomed to deprive ourselves of our identity, uniqueness, privacy, the right to be independent and important in the future era?

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