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Transhumanism: Influence on the Modern Society and the Working Environment

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Abstract

The paper analyses the idea and definition of transhumanism, as well as various applications and entry of transhumanist ideas into the business world, and their impact on labour/employees. In addition, the paper deals with the possibilities that exist before humanity based on the further development of transhumanism in terms of the advantages and dangers facing society and the individual. Transhumanist solutions that arose (and perhaps may have been initiated) during the Covid 19 pandemic are also presented, as well as an analysis of a case study that the authors singled out as essential for the work and the general relationship of transhumanism with the work-business environment.

Keywords: *Transhumanism, Capitalism, Technology, Working environment*

Introduction

Industrial revolutions started as early as 1789 and have continued to happen until today. Society has come a long way from the steam engine, electricity, the introduction of mass production, the discovery of the transistor to digitization and the application of advanced information technologies in all spheres of society. However, it should be noted that the time between revolutions was getting shorter and shorter, especially between the third and fifth revolution. Thus, the term Industry 4.0 and its "cyber" systems was first mentioned in 2011 in Germany, at the fair in Hanover. Just a few years later, in 2017, the idea of Society 5.0 was presented by the late Prime Minister of Japan, Shinzo Abe. (Caruso, 2018; Güzel 2021).

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The trends that dominate society significantly affect business life and work in general. First of all, it is necessary to take into account the fact that people's life expectancy has increased, which further conditions later retirement and a longer period of learning and dealing with career issues. Likewise, the skills gap between jobs will continue to widen. Further, change in information technology has a global scope that forces organizations to introduce new structures and change organizational structures and schemes. The concept of transhumanism, with the H+ symbol of the movement (which comes from the word Humanity (Pilsch, 2017)), is gaining more and more importance. Biotechnology, artificial intelligence and other smart technologies have become an integral part of the global environment. Furthermore, the influence of this concept on the social, economic and political aspect of functioning is becoming more and more intense, so it is advisable to consider all its advantages and disadvantages.

The concept and development of transhumanism with implications toward work and labour

The term transhumanism was coined by the British scientist (biologist and philosopher) Julian Huxley (younger brother of Aldous Huxley) in the mid of the last century (Huxley, 1957). However, transhumanist ideas can be traced back to the Epic of Gilgamesh through the ancient myth of Icarus to the medieval motif of the fountain of youth and the most important paper of Giovanni Pico de la Mirandola from 1486, On the Dignity of Man, as well as Bacon's New Atlantis, written in 1626 that presents utopia without slavery or poverty, governed by a religiously tolerant scientific elite, and focusing on research toward the conquering of disease, "the prolongation of life, the restitution of youth to some degree, the retardation of age" (Bacon, 2006).

In modern times, the torchbearers of transhumanism have been persons of various qualifications and vocations, and among the most famous are certainly former US President Benjamin Franklin with his idea of cryogenisation (so that he could see what America would be like in a hundred or more years), as well as Friedrich Nietzsche with his thesis about the superman (Franklin, 1956; Nietzsche, 1986). Nevertheless, the most responsible for the popularization of transhumanism is the New School, and one of its educators and philosophers, FM-2030 (Fereidoun M. Esfandiary). His famous book *Are you a transhuman?: Monitoring and Stimulating Your Personal Rate of Growth in a Rapidly Changing World* is based on the ideas of Italian futurism from the beginning of the 20th century and claims that in the middle of the 21st century people will become immortal, or rather will defeat aging by improvement of the human body with technology, while advocating for overcoming capitalism and socialism through the automation of work and the increase of available free time (FM-2030, 1989). Another author is extremely important for transhumanism - the British philosopher Max More, who in 1990 founded an association of philosophers based on futurism and transhumanism (Hughes, 2004) and provided the most significant definition of transhumanism: "transhumanism is a set of life philosophies that seek the continuation and acceleration of evolution of intelligent life beyond its current human form

and human limitations through science and technology, guided by life-promoting principles and values" (More, 1998).

In order for super-humans to be created, it is necessary to go through several stages. In the first of them, the people should be closely related to high technology. Reality indicates that this phase is ongoing - in the field of healthcare, there are already numerous aids, such as pacemakers, artificial organs, various implants, even nanobots that move through the cardiovascular system, etc. which make people's lives better and prolong them (Guzel, 2021). Gregory Walters claims that transhumanism will, step by step, genetically change homo sapiens and turn them into a completely new, better and more perfect species (Walters, 2013). Perhaps the controversy surrounding transhumanism lies in the question what man (and worker) can become in the future. In the past three decades mankind has experienced the greatest technological progress in its history, so the question is in which course this progress will take place (Brudar, Perić, 2021). On the other hand, "as the power to transform our native powers increases, both in magnitude and refinement, so does the possibility for self-alienation, for losing, confounding, or abandoning our identity" (Kass, 2003, 294).

The position of man in modern society under the influence of transhumanist ideas

In his book entitled The Age of Surveillance Capitalism, Zuboff argues that the current capitalist system is predominantly characterized by a constant search for data and an increasing degree of surveillance over the population. Of course, the first goal is the acquisition of enormous profits by neo-imperialist, technological corporations (Zuboff, 2019). Various theorists also call this phase of capitalism cyber capitalism that aims to fundamentally change the essence of human society. According to them, all the benefits of technological development will not be directed towards the betterment of the entire population, but exclusively for the minority-elite (Peters, Britez, Bulut, 2009).

What is certain is that at the global level, the major corporations and interest groups of elites who have a high degree of political power are taking over the lead. Some of these corporations, like Facebook, have already "mastered" the human psyche and they control an incredible amount of information (in 2023, it is estimated that this network exceeded the limit of 3 billion users - https://s21.q4cdn.com/399680738/files/doc_financials/2023/q4/Meta-12-31-2023-Exhibit-99-1-FINAL.pdf), so the governments of some countries work closely with them, rather than restraining them, although there are occasional attempts. iPhone is used by 1.38 billion users in 2024 (https://backlinko.com/iphone-users), making it one of the leading companies in terms of population data ownership; they are by far ahead of any other similar institution. And as we are now all too aware, our digital devices are constantly tracking and surveilling our every move. The information gathered is used for various purposes: to grant access to credit, to push advertising, to monitor terrorist activities, to check our mental health and emotional well-being (Danaher, 2017).

Advances in science and technology have made many once difficult jobs now easily and effortlessly done at the touch of a button. However, one of the possible consequences of transhumanism is the increasing influence of technology in society and the life of an individual, which at this rate can lead to the domination of machines over people. The mentioned phenomenon represents the so-called evolutionary paradigm that will lead to a change in people's mentality (Civelek, 2009), and the development of robotics will lead to the emergence of new economic models that will force people to constantly worry about permanent employment and the provision of life resources (Brundage, 2015). In May 2020, a bestseller about the life philosophy of Bezos was published, entitled "Bezonomics: How Amazon is changing our lives and how big companies are learning important lessons from them". Specifically, the book depicts the way in which the commercialization of artificial intelligence changes the social-psychological fabric of people's lives and work. Likewise, the book abounds with examples of how not only Amazon, but also a number of Silicon Valley companies (including Musk's Neuralink) are actively reengineering the human essence (Dumaine, 2020). GAFAM, i.e. the giants Google, Amazon, Facebook and Microsoft, have long been in the "game" of social engineering in all areas of life and work. Among other things, these companies promote the idea that artificial intelligence can "wipe out" the need for any regulation at both the micro and macro level (Giesen, 2016; Touzet, 2017).

The Covid 19 pandemic and transhumanism

Klein advocates the view that in modern history the fear of various disasters (infectious diseases, wars, economic crises, dangerous environmental changes, etc.) has been manipulated a lot, all in order to implement political and social changes (Klein, 2008). After the outbreak of the pandemic, he presented a theory about the so-called Covid shock treatment experienced by all of humanity (Klein, 2020). In this way, the scene was created for the introduction of digitization in every sphere of human existence. But, the interest from this movement will primarily lie with large corporations, while people on the other hand will be put in a very unenviable position of societies that are largely controlled by corporations (Cellan-Jones 2014; Lamola, 2021).

Since the very beginning of the Covid 19 pandemic, the proponents of Industry 4.0 have visibly advocated for the further proliferation of artificial intelligence that aims to assimilate societies around the world into a perfect technological ecosystem. The pandemic seems to have been an excellent cover for the implementation of transhumanist ideas; since 2020 to the present period, the influence of high technologies in human lives has never been more intense and comprehensive, and it is assumed that this trend will surely strengthen in the coming period.

Experts from the University of Johannesburg, commenting on the pandemic, made the following statement: "no one could have guessed that some industries that we took for granted would be almost completely shut down... this especially applies to aviation, hospitality, entertainment... furthermore, no one could have imagined that shaking hands with friends would become life-threatening...that's bad news...however, the light at the end of the tunnel is still visible - this is not just the era of the pandemic, this is the era of the

Fourth Industrial Revolution..." (https://www.dailymaverick.co.za/article/2020-07-23-evolution-as-revolution-covid-19-in-the-timeof-the-fourth-industrial-revolution/#gsc.tab=0.)

Shaw, Kim and Hua in their paper vividly presented the successes from East Asia; in the midst of the pandemic, and with the help of high-tech applications, people's mobile phones were connected to algorithms that monitored the state of infection in a large population with military precision. In Singapore, progress had even gone a step further, with a robot made by Boston Dynamics patrolling public areas and monitoring whether people are following social distancing rules (Shaw et al., 2020).

In order to continue with a "normal" life, already during the first waves of the pandemic, technology began to manage human behaviour. It allowed them to remain in contact with the environment during periods of quarantine and self-isolation, but at the same time increased the level of their technological dependence. At the same time, all this was accompanied by an even greater degree of monitoring of consumer habits and also by the influence of IT giants and international trade chains in the life of the average person.

Transhumanist ideas in the work environment

The use and mobilization of human energy (so-called biopower) in the workplace is not a new phenomenon, as it dates back to the 19th century. Frederick Taylor, a mechanical engineer by profession, viewed the workforce in a very simplified way - workers are there to start production that should be as productive as possible. They are expected to provide maximum effort in order to create the best result. The expenditure of human energy must constantly be channelled, just as the author did in his precise measurements of movement and time (Taylor, 1911). All of the above represents the cornerstone of modern industrial capitalism, because the capitalist order rests on the idea that labour power, i.e. biopower, is the imperative of productivity. Fleming points out that during the 20th and 21st centuries there has happened a complete unification of people and factories and proposes the term bureaucratic capitalism, and in the 90s a large number of theorists and practitioners in the field of management and organization began to affirm the idea of blurring the boundaries between work and private life. Therefore, the clear line between working hours and hours spent in personal/family activities has almost disappeared (Fleming, 2014). This is supported by legislation of Western Europe and the U.S., where governments are generally liberal and encourage rapid economic progress, provide businesses with tangible preferences in the organization of labour, allowing the use of labour in a neoliberal direction (Gevorgyan & Baghdasaryan, 2021). The main objective of this is maximizing the profits.

Although Fleming does not mention the application of human capacity improvement techniques, his bureaucratic model is very close to those ideas - people are a vital part of work that is under constant external control of their organizations. Taylor's model, in modern literature, is perceived as very cruel and inhumane, since it is characterized by constant external control of workers by the organization. However, today the situation has advanced towards the application of internal bioengineering. According to Fleming, this

approach is still aimed at people in a positive context; they can now, with the help of various pharmacological stimulants, break the limits of age, endurance, physical appearance - it can be concluded that the capacity to control, manage and modulate human capital has reached its peak (Rose, 2007; Fleming, 2014).

There is, unavoidably, a blurring line between restoring/enhancement: enhancers enable humans to work longer, more efficiently, in extreme conditions; enable cognitive restoration/maintenance for the elderly or the sick/the disabled (Palazzani, 2022). Cederstrom believes that the application of the so-called smart drugs can even improve the quality of life of employees by leading to a better work-life balance. In particular, various pharmacological substances amortize stress, which initiates an increase in productivity and work intensity, reduces the number of working hours and increases the time a person spends with family or in leisure activities (Cederstrom, 2016). In this context, there are trends in the framework of a neoliberal perspective that are in favour of the use of enhancers in workplace so that human capabilities, physical and mental, can be pushed beyond the limits of normal, with the aim of intensifying work and adapting to the increasingly extreme demands that employers deliver to employees. For example: truck drivers after taking stimulants are able to drive longer for many hours with greater attention and concentration. More and more individuals are using psychostimulants or the so-called smart drugs to peak concentration and cognitive abilities at work. These serious ("hard") drugs, were traditionally and exclusively used in the treatment of serious diseases such as epilepsy, attention deficit disorder, depression, etc. Researchers do not dispute their power to keep an individual awake and focused, but the fact that use among the undiagnosed population is on the rise is cause for concern. Use is particularly common among the student population, truck drivers and pilots, surgeons, bankers and even university professors (Ter Meulen et al., 2017). Thus, Modifinal has been named the "drug of entrepreneurs", especially by those who worked in Silicon Valley (Solon, 2016). In practice, it is also noted that smart drugs are used a lot in the financial sector, so it happened that investment bankers did not sleep for a couple of nights in a row, as long as important jobs or transactions were going on (Bloomfield, Dale, 2015). But the (mis)use leads to the appearance of various negative manifestations in the sphere of work, such as burnout syndrome, imposed workaholism, imbalance of business and family life, etc. (Fleming, 2016).

The use of technical and biomedical achievements for the purposes of improving human performance (physical, emotional or intellectual) is no longer a new phenomenon and has been used in Western cultures for more than two decades. By the way, the term human enhancement itself includes a whole range of different interventions such as implants, mental boosters, nutritional supplements, genes used in sports, reproductive technologies, mood-altering drugs, plastic surgery, growth hormones, medical antiaging treatments, etc. (Bostrom, 2002, Savlescu, 2009; Coenen et al., 2009). All of these techniques have the same goal of pushing the limits/potentials of the human body. But they go far beyond the realm of traditional medical therapy (Hogle, 2005). On the other hand we have exoskeletons that are a practical example of transhumanist technology under study for the treatment of

individuals who are partially or fully paralyzed or to be used prophylactically to avert workplace injuries from occurring in high-risk environs such as warehouses (Ferguson, 2018).

Naturally, the mentioned methods have long caused debates in professional circles, and one of the main questions is: Is it really necessary to use psychostimulants in the workplace in order to increase productivity? Further questions related to the social correctness of such treatments are gaining momentum, and all of them could be sublimated into one - do all the improvements serve people to make them feel better objectively (Clarke et al., 2016; Tamari, 2017; Pustovrh et al., 2018).

Sociologist Anthony Elliot points out that the number of employees who fight age discrimination with extreme forms of rejuvenation, starting with collagen fillers against wrinkles and ending with serious plastic surgery, is growing rapidly. Although no profession is excluded, these groups most often include senior managers, pilots, lawyers and real estate agents (Elliott, 2008). Therefore, modern technological and medical achievements are used in order to "undo" the years and thus automatically raise the competitiveness of the individual on the labour market, in addition to satisfying the personal need for a good/attractive appearance. However, with cosmetic surgery becoming a sociological phenomenon, there are other practices that seem even more unnatural. For example, women in developed countries are increasingly choosing to delay menopause in order to postpone conception for as long as possible, sometimes even after the age of 50, and there is also egg freezing, which allows the career to be kept active as long as possible. The companies Google, Apple and Facebook even provided their employees with free insurance for the freezing procedure under the slogan "freeze your cells and untie the wings of your career" (Crary 2013; Cutas, Smajdor, 2015; Lesnes, 2014; Petropanagos et al., 2015).

(Non)human aspects of transhumanist ideas

In his book A History of Transhumanist Thought Nick Bostrom, important promoter of this movement, expresses the following position: Virtual reality, genetic engineering, implantation, application of aesthetic surgery, etc. are technologies that can greatly help people change in a positive sense. The transhumanist movement will allow such options to become available to every human being and to be implemented safely for years to come (Bostrom 2005). Further, it should increase strength and control pain, and provide the 'making of new species by transplanting of one species into another (Hughes, 2012).

British transhumanist David Pearce believes that the concept of transhumanism can best be understood if its three main categories are taken into account - super longevity, super intelligence and super well-being. Accordingly, Eric Drexler, the inventor of nanotechnology, claims that we should move towards the creation of self-sustaining organisms where all the atoms of the body will be replaced by nano machines. Thus, the issue of aging will be completely resolved in favour of people (Freitas, 2013). Only in this way will there will happen a real reengineering of human society and people will become like Gods - Homo sapiens will be replaced by Homo dues (Harari, 2018). In his papers,

Livingstone states that transhumanism aims to create people who have the qualities of gods, just as can be seen in a large number of mythological works (Livingstone, 2015; Edman, 2019) and "with the emergence of cyberculture, the techno-utopian meme-plex has found its natural medium, and has been furiously mutating and crossbreeding with contemporary political ideologies, philosophies and religions" (Huges, 2012: 759).

When it comes to achieving super intelligence, one of the first inventions in practice is Elon Musk's "neural lace" in which the human brain should function connectedly/simultaneously both with the machine and with other brains (Bostrom, 2014). Furthermore, transhumanism insists on super well-being as well, which implies the disappearance of all forms of suffering. Happiness should be a constant state, and it can be achieved through the use of synthetic drugs and genetic engineering (Kurzweil, 2013). The close connection between artificial intelligence and humans has already partially changed the population around the planet. The people slowly, over time, abandon their characteristics, lose their human subjectivity and gain technical rationality, thus becoming easy for "programming" and various forms of manipulation. Furthermore, while humanists believe that people should reach the peak of their potential through the system of education and culture, transhumanists emphasize the introduction of a completely different, new set of values, still insufficiently known to people (Giesen, 2018). Since the movement points out that a completely new human being should be created, in that case a completely new society will also be created (Dorthe, Maestrutti, 2015).

The integration of nanotechnology, biotechnology, information technology and cognitive sciences will lead to the so-called Great Convergence, in which sophisticated intelligent machines will closely cooperate with the human brain. As an example of transhumanist practices in the business world, we can cite the example of the company Apple which in 2017 launched the Nucleus 7, a sound processor, which connects the iPhone with a chip that is implanted in the ear via a Wi-Fi connection. The device allows the user to be constantly connected and thus easily make calls, listen to music, watch video content (https://www.cochlear.com/us/en/professionals/products-and-candidacy/nucleus/implant).

The practices implemented by these companies serve as an example of the introduction of transhumanist ideas under the umbrella of facilitating everyday life. On the other hand, innovations that dehumanize the human race are welcomed as interesting and fun. Dehumanization and "cyborgization" will stop the natural evolutionary process, all with the aim of creating an order in which the minority will profit from the work of the great majority (Giesen, 2018). Kevin Warwick believes that this will lead to the creation of a new species, that is, the "chimpanzee of the future", the disruption of the general well-being of life and the creation of an even higher level of inequality. A situation where people can be easily manipulated will erase democracy and invalidate the rule of law (2004). A contour of a possible totalitarian dystopia of the future is currently in creation and advertisement addressed to employees in the near future may sound like: "Become a cyborg at the expense of our company" (Haraway, 2007). Some researchers even think that in the era of cyborgs

and transhumanism, classical biological man becomes obsolete and outdated (Đorđević, 2016). This will have a direct bearing on the formation of a post-industrial labour market: the most in-demand may not be highly qualified specialists who have developed their knowledge, skills, and abilities, acquired the necessary experience and competencies, but individuals with better and more expensive modifications (Gevorgyan & Baghdasaryan, 2021). Growing the workforce in this way would marginalize all those who cannot improve their abilities through medical and/or technological advances (Miceli & Mungan, 2021). From this perspective, there will be a persistent perception that all those who are unable to pay for expensive surgeries will have less job opportunities, and lower chances to realize their labour potential (Gevorgyan & Baghdasaryan, 2021).

One good analysis and indicative case study

In order to illustrate this paper, the authors decided to present in more detail the research by Stephanie Gauttier, which was conducted on a sample of three companies, and the results of which were published in a professional article entitled I've got you under my skin in 2019. Specifically, she investigated the ethical behaviour/practice of companies that offered dermal microchips to their employees (Gauttier, 2019).

In 2015, the company Epicenter (Stockholm, Sweden) offered this practice as "facilitation" in daily functioning. By implanting it in the arm, under the skin, employees have access to the cafeteria and business premises with just one movement. Further, the company Three Square Market (Wisconsin, USA) started microchipping in 2017. Those who agreed to microchip installation have easier access to copiers, business email, exchange of business cards, opening the office door, paying in the company restaurant, etc. Employees who did not choose the implant solution had the option of choosing another device that is worn around the wrist and works on the principle of radio frequency. There is also an example of the company New Fusion (Mechelen, Belgium), which also started installing microchips in 2017. These companies belong to the category of small and medium-sized enterprises and deal with digital marketing and high technologies.

Data for the research was collected through Google News; the researcher entered the company names and the word implant separately and there appeared two newspaper articles written by journalists who had had microchips implanted themselves.

The results of the research opened up many possibilities for drawing a large number of conclusions. When it comes to ethical responsibility, each side had its own point of view. The companies believed that in this way they actually give new opportunities to employees, further develop options for health monitoring, help with navigation while driving, etc., and that chips can increase the performance of employees in all areas of work gaining an advantage over the competition together with the idea of "changing the world" and creating a better future. Surveillance and covert data collection were not analysed as alternatives at all. Nevertheless, if the situation is viewed from the level of an individual, i.e. employee, implanting a chip can have extremely negative connotations such as violation of bodily identity and privacy as well as ambiguity related to the long-term use of chips.

When all three companies are taken into consideration, the question arises as to how free the employee's free will really is - if a candidate is asked at a job interview whether he would agree to implant a chip in the future, what impression does he actually get? Is a chip a requirement to get a job? And the most important thing - the culture of a company where some of the employees are chipped and some are not, is surely changing forever. The general attitude regarding the issue of social outcomes is that chipping in the organization should be given time in order to reach adequate conclusions. Naturally, the introduction of legal regulations is necessary in order to control the activity of companies and to make employees feel safe and protected.

Conclusion

Many futurists' ideas seemed incredible to the vast majority of contemporaries in their time; nevertheless, they came true. Let us mention but a few: cosmonautics, robots, organ transplantation, artificial intelligence, etc. This will also happen in the case of many transhumanist ideas. The fields opened up by new technologies defy the hitherto known structure of the functioning of man and society. The idea of improving the human immune system so much with nanotechnology as to increase its lifespan by fifty or more years, the idea of transferring the human brain/consciousness to some information carrier, i.e. digitalization – all this opens up positive possibilities as well as consequences that would be difficult to realize at this moment should the implementation of ideas happen.

Modern science is developing at a rapid pace, and if transhumanist ideas are fully implemented, human nature and the purpose of life will change completely. Transhumanism is developing alongside the current Industry 4.0, but the implementation of some transhumanist solutions and projects can give impetus to the existing disproportionate distribution of wealth, as well as the advancement of control of society and individual workers and their dehumanization by companies, governments and interest groups. For example, employers may find the idea of improving the working abilities of employees and their control through chips, medications, etc. particularly attractive. In this sense, some companies are already using chips and exoskeleton aids that allow their workers to be more productive.

"The general public is the largest body of people to represent humanity, yet it is also the body least likely to advance towards transhumanist future willingly, instead utilizing what technology becomes widely available for superficial purposes of entertainment and self-gratification" (Puşkin, 2021: 48). On the other hand, the elite has the technological and organizational resources and the will to make advancement towards improvement of humanity (or rather its own members). However, the progress it achieves (as viewed through transhumanist lens) is limited by struggle for dominance (over the society and working class), control and overall capitalistic aim of wealth that reproduces itself. This reflects some of Aldous Huxley claims that "incredible changes will take place in the New World, which will include a complete reorganization of society, the abolition of the free will of people, the appearance and use of chemical substances that help mood and sleep, a different approach to science and work, etc. (Huxley, 1932).

The ideas of transhumanism to push the boundaries or defeat the rules that limit man are justified, but the concept of transhumanism has become burdened by its starting point - man, who will be satisfied by power and wealth and selfishness rather than the idea of progress, which is quite abstract and undefined in terms of time. Precisely for this reason, the concept of transhumanism, including labour and work issues should be constantly re-examined, put in the focus of social debates and constructive criticism. We should not "run away" from the development of technology, because it benefits the human race and functioning, and brings many benefits to modern man. However, what must be avoided is its dominance over human essence and purpose.

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