Challenges for tech entrepreneurs in the new digital reality and among sanctions

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Abstract. The 2020s is a new stage of global digitalization, a period of a new digital «unreal» reality, and the formation of a biodigital economy, which promoted the further development of tech entrepreneurship and a new image of a businessperson – a tech mogul influenced by new information, communication, and/or digital technology, as well as new humanitarian concepts, such as transhumanism. For Russia, 2022 has become the year of the sanctions war between the West and Russia, which launched a military operation in Ukraine and the domestic policy of import substitution, which introduces its own changes to the model of a Russian tech entrepreneur. The paper demonstrates two ways of scientific and technological progress or innovation development, tech entrepreneurship and businessperson, their opposition. Thus, the digital economy contributes to consumerism and creates new leisure industry such as gaming, leading to a new inherently addictive dependence of man on computer games, rather than the quality harmonic development of man according to Florensky. To be human-centered, new technology must facilitate human interaction, transforming the individual into a more harmonious and meaningful being. The results of studying the tech entrepreneurship, confirm the authors' hypothesis of an ambiguous contradictory impact of the digital economy on the tech entrepreneur, who is forced to quickly readjust, create new business models, explore new global markets, and switch to a new format of business and simultaneously be a consumer, for example, of video games that often deform human consciousness. Not every company or businessman is able to cope with such a task, which leads to their bankruptcy.

Keywords: global digitalization, technology entrepreneurship, platform economy and transnational IT corporations, new model of businessperson – tech entrepreneur, digital technology of the Industry 4.0 (high-tech), high humanitarian technology (high-hume), man-internet, man-gamer, «hacked man».

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Introduction

Global digitalization is fundamentally changing the lives of people and humanity around the world. Startling global technological breakthroughs have occurred in most areas of human activity, in artificial intelligence (AI), robotics, nanotechnology, neurotechnology, virtual and augmented reality, and biotechnology leading to transhumanism, even promoting organ replacement. K. Schwab, the founder of the World Economic Forum in Davos, calls it The Fourth Industrial Revolution, which "In its scale, scope, and complexity, <..> will be unlike anything humankind has experienced before" (Schwab, 2016). However, the challenges of the digital economy must also be met by human beings, including entrepreneurs; their system of values must comply not only with digital morality, which sets the rules for the use of AI, big data technologies, robotics, and biotechnology, but also with universal morality, ethical principles, and human identity. Today there is a huge risk of technology outstripping society's capacity to control it. The new digital system does not need a person capable of thinking, analyzing events, creativity, it prefers a zombified subject capable of executing commands, a "hacked person". The man as a Homo sapiens is being gradually alienated from his essence.

AI cannot replace human cognitive abilities in everything, especially in creative processes, where the

creative middle class, whose numbers are declining every year, is central. There is a dramatic replacement of existing vocations, which makes a huge segment of the population unemployed. Not all people can acquire a modern profession overnight, especially young people starting their working life and elderly individuals of pre-retirement and retirement age. The format of doing business is also changing rapidly, new business models are emerging, and forms of capital are evolving. Globalization coupled with digitalization dictates new models of tech entrepreneurship and entrepreneur affected by the new information, communication, and/or digital technology, new humanitarian concepts, such as transhumanism, biodigital economy. To be successful and efficient, entrepreneurs have to do business in many countries around the world, including in value chains. However, small and medium enterprises lack the financial resources for this, and the current geopolitical problems seriously impede their promotion. The introduction of sanctions, or rather the sanctions war between the West and Russia, due to the Russian military operation in Ukraine, worsens the position of Russian business and limits its access to advanced technology. The sanctions affected exports of semiconductors, telecommunications equipment, electronic components, aircraft leasing, etc. The credit rating of Russia has also been downgraded. All this causes significant damage not only to Russian business and Russia's national economy, but also to the global economy as a whole. Many foreign companies that had to leave Russia for political reasons suffered losses, disruptions of supply chains (logistics), production chains, etc.

Ecosystem and platform businesses that operate globally, have sufficient financial capacity, and spare no expense to buy the most innovative and expensive start-ups to maintain monopoly power are now becoming increasingly important. Such business has a huge user database. All this contributes to new forms of economy monopolization, which sometimes even antimonopoly authorities are not able to track. The role of fake capital and vendor power is becoming stronger. Competition for resources and markets intensifies. The economy is increasingly under pressure from big capital, which benefits from information, trade, sanctions, economic, and other wars and state support, leading to an increased role of the state. The clear evidence of it is the significant support provided by the Russian state to the largest sanctioned Russian corporations and banks.

With the increasing influence of major platform businesses and transnational digital corporations, one of the central issues of global digitalization and the new tech entrepreneurship is the affected party, which includes tech entrepreneurs and the "new workers". This problem becomes relevant because the largest transnational corporations (TNCs) become digital platforms and monopolize the global economy, as well as the impact of the information and/or digital technology, in particular high humanity technology (high-hume) on human consciousness. The growing tension in the world and the emergence of local conflicts that could unleash a new world war also have an impact.

Methodology

It is now possible to model a new relationship between human development and scientific and technological progress affected by global digitalization. To make things optimistic, there could be a unique philosophical school, a true economic (house-building) science, such as the concepts of man as a microcosm and organoprojection of P.A. Florensky (1999). After all, modern machinery and technology breaks such boundaries. In this regard, it is necessary "to separate information and communication technologies and high humanitarian technologies and to develop mainly those that contribute to the life of the human being himself, his nature, without upsetting the anthropotechnological and humanitarian-technological balance, which could lead humanity to disaster" (Yudina, 2021).

This makes the scientists across the world wonder if the society is ready for digitalization and the sixth technological mode. L. Grinin, A. Korotayev, in their work, argue about the transition to a new era – the sixth technological mode, which the world is standing on the edge of (Grinin & Korotayev, 2015). They emphasize that its outlines begin to form in the economies of the most developed countries and demonstrate a focus on "high" technology. E. Ansong and R. Boateng examine the business models of digital enterprises and look into their direct impact on the human potential of an entrepreneur and a worker in a digital society (Ansong & Boateng, 2019). A. Negrea et al. explore the priorities of digitalization in making new policies

and pay attention in passing to the formation of a new man (Negrea, Ciobanu, Dobrea & Burcea, 2019). D. Nepelski focuses on digitalization in Europe, the need for faster innovation and the formation of quality human capital for this purpose (Nepelski, 2019). S. Harrison, D. Tatar & P. Sengers examine human-computer interaction (Harrison, Tatar & Sengers, 2007). The same problem is raised by a team of authors led by S. Harrison (Harrison, Erickson & McDonald, 2008). It should be noted that a great virtue of the work is that people and machines are not considered separately, but through their relationship. While exploring the digital transformation, the authors focus on the need to preserve all the basic values of human civilization, security, and privacy of personal space.

Y. Rogers et al. also dwell on the relationship of man and computer socially, intellectually, and emotionally, and they emphasize that we should go beyond the purely technical aspects and focus on value and ethical preferences (Rogers, Sharp & Preece, 2007). They also focus attention on the fact that the modern digital generation has higher requirements for technology, linking it with a high quality of life, noting that high technology can be not only a means of communication for individuals, but also assistants in conducting business, such as the supervision of children and the elderly. At the same time, the authors note that such control may be perceived by those being monitored as an infringement of their freedom. R. Metz examines how new technology becomes indispensable for human life. it is virtually impossible to conduct business, make bank payments, shop, choose vacation destinations, and book tickets without it. Even flight safety depends on computers (Metz, 2012). K. Hernandez, B. Faith et al. analyze the impact of digital technology on economic growth, labor productivity, the formation of new markets, as well as explore the pressing issue of employment (Hernandez et al., 2016).

D. Isenberg looks into entrepreneurial ecosystems, argues that they enhance business opportunities, and barely scratches the surface of human-computer interaction issues (Isenberg, 2021). I.Z. Geliskhanov, T.N. Yudina show how "the digital economy through digital platforms improves the efficiency of business processes" (Geliskhanov, et al., 2018; Yudina, 2021). E. Stam reviews entrepreneurial ecosystems and their impact on the economy (Stam, 2015).

The review of relevant sources suggests that researchers consider many issues of digitalization in detail, including the platform economy. Ath the same time, the impact of the new digital reality on the tech entrepreneur has remained outside the research area, which is the purpose of this paper. The aim of the study is to consider the impact of new mechanisms and forms of entrepreneurship on the entrepreneur and the worker. The study hypothesis is to determine how the digital economy, including the platform economy, affects the formation of the technological entrepreneur and their worker, and what its challenge is. The methodology of the study consists of the interdisciplinary, institutional-economic, constructivist methods, general scientific methods that use comparative, logical analysis and synergistic approach.

Results

The role of AI and robotics in the emergence of modern business systems and the tech entrepreneur

A huge role in the digital economy is played by innovation ecosystems and platform-based innovation. They significantly reduce transaction costs, eliminate outdated links, promote new startups, industries, business models, and Robotic Process Automation (RPA) business processes, which is a type of automation technology based on software robots, which are becoming more adaptive and flexible, and artificial intelligence. The software robot mimics human actions, interacting with the system interface, which allows you to provide better and more reliable services to customers. This forms the intelligent automation, creating the conditions for making new high-quality technology. RPA replaces human labor at the necessary interaction points.

The progress in using AI around the world is enormous. For example, US government agencies have begun to actively use artificial intelligence to make important decisions. Completely new biological systems with predetermined functions are also created; for example, robots with integrated live muscles, capable of copying human movement. Unmanned delivery trucks and Yandex cars are already running in test mode in cities in Russia and around the world (Leybin, 2021). SBER and KAMAZ are also gradually introducing unmanned vehicles. With the growing popularity of AI and software robots, businesses and governments

are ler, despite their innovation and compliance with digitalization, they pose risks of undermining both the financial system of individual countries and the global financial system. Thanks to their financial power, they buy up companies in various industries, sometimes for next to nothing. Their activity contributes to the concentration of capital in the largest transnational corporations, which leads to monopolies crowding out free business.

The globalizing digital world is now breaking up into zones of influence of individual large companies. For example, M. Zuckerberg is creating a social metaverse on a single platform using AI and marginal robotization, combining the functions of social media and video games, which is the next step after NFT in developing a blockchain culture where humans and smart things interact. Metaverses are similar to the real world, they can host advertisements, trade, spread information, and much more. They have digital real estate and opportunities to rent it out. In 2021, digital real estate in meta universes sold for 500 million USD, and NFT token sales for January 2022 alone were 6 billion USD[1]. Today, there are dozens of games offering to explore space, distant planets, participate in star wars, to feel like a super-rich man. All of this takes the user into a fantasy world far from reality. It's a world of "unreal" reality, a "brave new world", according to Huxley. But the person living in such a world is not ready for the "real" reality; they transfer the game actions from a fictitious world to the real one at times.

Today, there are more than 2.3 billion gamers around the world, i.e., a third of the world's population plays video games. This suggests that one third of the world's population are consumers of video games, which often do not contribute to the harmonious personality development, but instead make the mind narrower and develop the new "game addiction". There is even a game called Crossverse that, in theory, should combine several metaverses. The P2E (play-to-earn) business model began to form about 5 years ago. Its users are able to earn cryptocurrency by clashing characters against each other. It is a mixture of video games, metaverses, and DeFi (decentralized finance – financial services on blockchains). The main difference between P2E and metaverses, where the main thing is communication, is the opportunity to earn significant funds. More and more people create startups on promoting virtual pets and digital real estate. The popularity of P2E games can be judged by the capitalization of the most famous one, AxieInfinity, launched in 2018 by SkyMavis, a Vietnamese game studio. At the moment of writing, the company claims to have more than 10 million active players in its games. In October 2021, it was valued at 29.9 billion USD. This is more than four times the capitalization of Ubisoft and comparable to such gaming giants as Electronic Arts (40.9 billion USD), Nintendo (53.8 billion USD), and Activision Blizzard (61.1 billion USD)[2].

Quests net 150 SLP, which can be later exchanged for regular money on cryptocurrency exchanges. Some players earn up to 400 USD a month. However, the rate of cryptocurrency is constantly increasing, and capitalization is increasing too, which further attracts users. In Russia, the rush around P2E has not yet begun, but there are already dozens of job ads on websites looking for a "player" with salaries ranging from 250 to 400 USD a month. But some states consider P2E to be fraud. China has called the industry a scam and warned of a tougher policy on computer games. South Korean authorities have called for the removal of P2E games from the Apple App Store and Google Play. Today, blockchains are competing as browsers did in the early 2000s. The sensation generated by blockchain culture also makes millions of people get involved in pyramid schemes. Not only are these pyramid schemes dangerous, but they can also spread calls for terrorism, violence, racial discrimination, the military resolution of all kinds of conflicts, and most importantly the subjugation of the human consciousness, whom transnational corporations seek to turn into servants and an uncomplaining workforce.

It is also possible that P2E becomes the main node for all elements of a metaverse which everyone will join eventually. Due to the conflict in Ukraine, the Russian government has plans to make cryptocurrency legal

[1] *Lapshov, E. (2021). Kak milliony lyudej zarabatyvayut den'gi na srazheniyah avatarov v virtual'noj real'nosti. Available at:https://www.forbes.ru/tekhnologii/455547-kak-milliony-ludej-zarabatyvaut-den-gi-na-srazeniah-avatarov-v-virtual-noj-real-nosti?utm_source=telegram&utm_medium=social&utm_campaign=o-populyarnosti-p2-e (accessed 25.02.2022).*

[2] *Lapshov, E. (2021). Kak milliony lyudej zarabatyvayut den'gi na srazheniyah avatarov v virtual'noj real'nosti. Available at:https://www.forbes.ru/tekhnologii/455547-kak-milliony-ludej-zarabatyvaut-den-gi-na-srazeniah-avatarov-v-virtual-noj-real-nosti?utm_source=telegram&utm_medium=social&utm_campaign=o-populyarnosti-p2-e (accessed 25.02.2022).*

and create a national system. The AI is currently researched in different fields: math, economics, engineering, neurobiology. Their specialists strive to study ways to become a hybrid society. In future, people will enter a full-scale digital world, coexist with smart devices, robots, androids.

Even now, the UN declares "the death of liberal globalism and a new integrated world order project for the global class-based society called "happytalism" that is going to replace capitalism and socialism. This project proposes a new economic concept that puts forward happiness, prosperity, and freedom as its symbol. However, only a narrow circle of citizens from "privileged countries" are going to measure it, chosen based on digitalization and implemented "freedoms" and "values". Global transnationalism and transhumanism seek to continuously improve human mental and physical capabilities, eliminate aging and achieve immortality. To do that, they plan to use scientific and technological progress, AI, nanotechnology, and biotechnology. They're trying to turn the human brain into a computer. Super-billionaire E. Musk is hoping for a closer fusion of biological and digital intelligence as part of the biodigital economy, and to that end, he recently invested in a company that develops brain-computer interfaces. The result of the emerging biodigital economy could be an Internet Man, just as the Internet of Things was created earlier. After all, neurotechnology can be used to treat neurological diseases, but it can also drive the development of "human enhancement", as well as its zombification.

Transhumanism seeks to undo the vast experience of humanity through the voluntary introduction of new technologies that unite the physical, informational, and biological worlds in order to "improve", or rather subdue, people, turning them into a mindless herd ready only to satisfy inferior needs. Therefore, it is highly likely that new forms of inequality between people will be added to existing forms of inequality in society. After all, digitalization is already transforming people, especially young people, in their daily activities, thinking, social organization, and system of values. The Internet is increasingly becoming the main source of knowledge for young people, ignoring the values of world scientific literature, they have a large number of virtual "friends" with whom they have not met in person, some of which may be terrorists and dangerous people. However, virtual communication reduces the number of true contacts, and defaces the group identity, blurring both social and ethnic boundaries, and distorts the self-identity of the individual, the comprehension of the real world.

The worldview of a modern person, especially a young one, is exposed to different unverified, contradictory, and sometimes deliberately false sources, so along with forming intellectual capital of a person, mental information has to be protected. The flow of information is "turbulent and turbid", which makes it necessary to ensure the integrity of personality. It shall be able to respond adequately to external influences. Digitalization blurs the identity of an individual, their freedom is narrowed, their consciousness is manipulated, turning them more and more into a robot. This appeals to Y.N. Harari's ideas of a "human god" – Homo Deus, according to whom "humans will merge with computers and machines to form cyborgs" (Harari, 2020).

For example, the corporate world constantly manipulates the consciousness of the buyer, promotes deliberately false advertising, uses various techniques to sell unnecessary goods to consumers. There are special focus groups that study the human brain to understand the patterns of consumer decision-making buying a particular product and to change the way stores, both conventional and online, operate according to this. More employers use polygraphs and other neurotechnology during job interviews and to monitor the employees' activities, and this process becomes more common. Camera surveillance in a workplace is also widely used. Direct or indirect monitoring of employees' brains could be next. Serious ethical issues will also arise from using neurotechnology to improve healthy brain function. This also raises questions of inequality, if brain-enhancing neurotechnology will only be available to a select few, and it will not be affordable for the rest. For neurotechnology to become the most advanced technology of the Industry 4.0, the public needs to discuss it more, because this leads not only to fundamental technological, but also societal changes.

This is confirmed by the spread of personal data happening nowadays, the surveillance of citizens through the Internet, and the destruction of the privacy of their personal space, as well as new types of crimes that are increasingly more common in a globalized world. UN Secretary General A. Guterres (2021) noted:

"We don't know how this information has been collected, by whom or for what purposes. But we do know our data is being used commercially – to boost corporate profits".

In the digital world, human consciousness is increasingly exposed to manipulative influences and is gradually being reshaped by targeted information with the widespread use of fictions and all kinds of falsifications. In China, for example, there is already an honesty score today, confirming the level of responsibility and civic loyalty to the regime. This makes humanization one of the main issues in the new community.

New relationship of man as a tech entrepreneur and consumer in digital reality

Theoretically, however, it is possible to build a high-tech human civilization with supertech that serve people in order to realize their "divine" purpose. At the same time, it can only happen when the people are aware and comprehend the changes, when a new rational understanding of the world forms without manipulating the consciousness of the individual. One of the main such bridges between physical and digital reality could be the Internet of Things (IoT). Today, any container or even a package can be equipped with a sensor or radio transmitter allowing the company to track its progress. It gives entrepreneurs managing complex and long supply chains the opportunity to fundamentally change the way they do business. The consumers can observe the progress of a product or document online. The digital revolution is decisively changing the way companies and individuals interact and creating radically new approaches. Going forward, the Industry 4.0 will result in new ways for businesses and consumers to not only interact, but to reward each other for using data, and consumers will gradually begin to become partners. The companies will need to anticipate the future and critically evaluate their organizational structure based on new technologies. They need to be able to upgrade it quickly when needed, and analyze the relationship between internal management and the flexible and adaptive strategies of the outside world to select new business practices and management approaches.

Currently, an example of a large innovative technology company that tried to turn its business into a tech entrepreneurship, but failed to do so, is Rosnano, a Russian company. After all, tech entrepreneurship is not just a new business based on innovative high-tech idea to make new products and services using science and technology. It also provides an opportunity to achieve a sustainable competitive advantage. Despite trying to create completely new products based on new technology, Rosnano was not able to quickly restructure its activities depending on the changing situation. It could not use the best international business practices taking into account the specifics of the business environment in Russia. As a result, it could not withstand competition.

Even its innovative success didn't help it, such as a joint project with Renova Group – a company called Hevel, which built Russia's first full-cycle plant for producing solar (photovoltaic) modules and the first industrial-scale solar power plant. However, many of Rosnano's projects were expensive and could not withstand competition. In particular, the well known project of building a polycrystalline silicon plant for solar energy in Usolye-Sibirskoye, Irkutsk Oblast, which required enormous investments and took a very long time to build. China was able to create a similar production in their own country during this time and started producing at a price much lower than the one expected in Usolye, which made Usolye production absolutely unprofitable and led to the closure of the enterprise (Mechanic, 2021).

Among the company's failures is a joint project to organize production of flexible displays in Zelenograd using the technology of the British company PlasticLogic, which was funded by Rosnano along with the US venture fund OakInvestment Partners. The project, which cost about 300 million USD, was completed in 2013. Even after several resets, it was never able to make money at an industrial level, because Western business practices were blindly copied in a completely different business environment in Russia. Another well-known project is Liotech. It was supposed to produce lithium-ion batteries in Novosibirsk, but also failed (Mechanic, 2021). The company could not effectively work out the market prospects of the product, its consumer demand, so despite the huge investments and state support, the project was not competitive. In the 14 years of its existence, Rosnano has made little progress, its assets are gradually shrinking, it is always in the red, and it

owes many banks, but most of all Sovcombank. The analysis shows that the history of Rosnano is one of the pages of complex and contradictory emergence of innovation system of Russia, which has its own quirks. The entrepreneur was not given full freedom and could not use new business practices, and blindly copying the breakthrough products of other countries did not help as well. Novelties turned out to be very expensive and not needed by the country's industry. The mentality of Russian business inclined to traditionalism, which is not ready for super modern innovations, also affected it. The company has failed to anticipate the digital future, critically evaluate its organizational structure based on new technology, and creatively apply the experience of the most prominent Western companies.

At the same time, international corporations that own online platforms and social networks know how to adapt very quickly to changes in the market situation. Many of them, however, disseminate user data and use hostile methods to retain them in order to maximize profits. For example, a small company in Nebraska (USA) is helping law enforcement agencies from around the world to monitor users of Google, Facebook, and other IT corporations (Brewster, 2021). And while new rules are emerging to regulate personal data, such as GDPR[3], which reduces the digital divide between the citizen and online platforms, many companies and platforms are breaking these laws. Thus, since May 2018, when GDPR started being enforced, to June 2021, the amount of fines paid by the companies was over 283 million EUR, and their number has reached 160 thousand violations. The largest fine was paid by Google – 50 million EUR (GDPR). Facebook (Meta) is constantly at the center of scandals. It has been accused many times of monitoring users and using facial recognition technology to collect biometric data from more than 100 million Instagram users[4]. The company, along with Google and Amazon, is on the radar of US antitrust agencies. With their technical capabilities, platforms can filter social media by date, data type, and even by sender and recipient. Due to the high technical level of platforms and their high competitiveness, states are required to constantly update laws on the issue. For example, in "2020, the EU developed new rules to enable European tech companies to compete with giants from America and Asia, they gained access to anonymized public and personal data"[5].

Almost all major international tech ecosystems across different platforms not only strengthen their monopolistic influence and develop new forms of competition, which are difficult to trace, but also have their own developments in the field of megaverse. Apple, Microsoft, and many other large holdings, as well as numerous startups, are doing it. Currently, businesses are on the verge of moving to virtual offices, which opens up new opportunities for their development. However, the individual, the entrepreneur, the worker is increasingly pressured by big capital of monopoly, which is greatly facilitated by the platform economy, leading to an increase in the power of IT companies. Tremendous value is concentrated in the hands of a small group of people, and this is reinforced by the platform effect of digitally shaped companies creating networks that connect sellers and buyers of products and services. This increases profitability through scale, which the rest of the companies lack. This exacerbates the inequality of entrepreneurship as a result of the Industry 4.0.

For example, the leader among US technology companies is Google, which derives most of its revenue from providing web ads and access to some new developments, now controls more than 90% of the global search advertising market, with revenues of 182 billion USD in 2020[6]. Google is also involved in transportation (Waymo drones), cloud computing, medicine. It has strong intrapreneurship, where products created in one

[3] *GDPR. GeneralDataProtectionRegulation. Available at: https://www.tadviser.ru/index.php/%D0%A1%D1%82%D0%B0%D1%82%D1%8C%D1%8F:GDPR_(%D0%A0%D0%B5%D0%B3%D0%BB%D0%B0%D0%BC%D0%B5%D0%BD%D1%82_%D0%95%D0%B2%D1%80%D0%BE%D1%81%D0%BE%D1%8E%D0%B7%D0%B0_%D0%BE_%D0%BF%D0%B5%D1%80%D1%81%D0%BE%D0%BD%D0%B0%D0%BB%D1%8C%D0%BD%D1%8B%D1%85_%D0%B4%D0%B0%D0%BD%D0%BD%D1%8B%D1%85) (accessed 25.02.2022).*

[4] *Batyrov, T. Available at: https://www.forbes.ru/newsroom/tehnologii/409349-facebook-obvinili-v-slezhke-za-polzovatelyami-instagram-cherez-kamery(accessed 23.02.2022).*

[5] *Available at: https://vuzlit.com/1250846/evropa_2020_novye_orientiry_evropeyskogo_ekonomicheskogo_upravleniya (accessed 25.02.2022).*

[6] *Brewster, T. Kak kompaniya iz Nebraski pomogaet FBR proslushivat' pol'zovatelej Facebook i Google. Available at: https://www.forbes.ru/tekhnologii/457287-kak-kompania-iz-nebraski-pomogaet-fbr-proslusivat-pol-zovatelej-facebook-i-google?utm_source=telegram&utm_medium=social&utm_campaign=nebolshaya-kompaniya (accessed 05.03.2022).*

office are used by other departments. It is very scrupulous about the human capital of its employees and encourages them in every possible way to improve their professional level. Recent years show rapid growth (70% in 2021). The company's popularity among users has also increased, which has given the company even more power. The corporation is growing both through acquisitions of other companies and through the opening of new offices. Google's parent company has reached a market value of 2 trillion USD in 2021. The company's capitalization amounted to 1 trillion USD[7].

The largest company Amazon, which concentrates sales of 75% of the global e-book market, began as an online store, and later diversified as an online retailer. The company accounts for half of the U.S. online shopping market. Today it owns a publishing house, a film studio, manufactures tablets, smartphones, it is the largest service provider, it opened the world's first automated supermarket without cashiers, it delivers goods using drones. The company has subsidiaries in numerous countries around the world. Its capitalization rose from 798 billion USD in 2018 to 1,756 trillion USD in 2022, and one share is worth 2,050 USD, with revenue of 368 billion USD in 2021[8]. Its owner, J. Bezos, has bankrupted many small bookstores and is one of the richest people on the planet.

The capitalization of another world's largest company Facebook (now Meta), the main developer and operator of social networks, which has concentrated in its hands more than 77% of mobile social networking traffic, is 569.2 billion USD[9]. Digitalization is backed up by powerful transnational corporations with vast amounts of information and the means to manage it, and hence real power in today's world. The analysis shows that today we can talk about creating a global instrument of redistribution of public wealth through powerful transnational corporations and the platforms created by them, the capitalization and popularity of which are rising ever more and which have a huge impact on all global business, as well as on the worker. The animal fear of the loss of vast capital and power pushes the super monopoly to dominate humanity, which creates wealth, and ultimately leads to its destruction. The pro-government policy of the world elite contributes to the blockage of social human self-organization, creative cognition, reveals the desire to control the communicative process in society, and put the individual under control, while all sorts of pandemics, which exclude feedback, strengthen this process. And what will be the "norm" of economic coercion for the total appropriation of the results of one person's labor by another is still difficult to predict.

The modern realities of digitalization and the human worker

The activities of transnational corporations and platforms lead to the dehumanization of human labor, which is increasingly losing its intrinsic value as the fundamental stimulus for human society. Human labor becomes a negative "pleasure," causing the feeling of being broken instead of joy. And while economic theory posits man as a physiological and social creature, the digital economy increasingly turns him into a cyborg who has no interest in the process of production, self-improvement, or authentic culture. They are more and more concerned with a well-appointed life with smart technology and the possibility of interesting leisure. The individual is not transformed into a creatively and harmoniously developed personality, but into a passive consumer of all new, most modern gadgets, i.e., a consumerist society is formed rather than a harmonious one.

Digitalization leads not only to dehumanization and a change in the essence of work, but also to a very rapid career change, which contributes to unemployment. The aging of the population and the prolonging of labor history, especially due to the increase in the retirement age in Russia, make this problem even more acute. All of this leads to a potential need for a new profession, comprehensive retraining, completely new skills, and mastery of fundamentally new devices. And as a consequence, the ability to master innovation is the key to an individual's adaptation to modern reality. The trend towards the disappearance of a large number of specialties will not yet affect medium and small businesses, especially in Russia, but large companies will be seriously affected. Especially large retailers will be affected, where more and more shipments will be made

[7] *Shamardina, L. Materinskaya kompaniya Google dostigla kapitalizacii v $2 trln. Available at:https://thebell.io/materinskaya-kompaniya-google-dostigla-kapitalizatsii-v-2-trln (accessed 10.03.2022).*
[8] *Available at: https://skolko-stoit.ru/skolko-stoit-kompaniya-amazon/ (accessed 05.03.2022).*
[9] *Available at: https://ru.allstockstoday.com/FB-kapitalizaciya.html (accessed 05.03.2022).*

by unmanned vehicles, and AI will also replace employees in the sales floor. The demand for workers in the IT will increase, generated by startups and corporations competing for competent developers of AI.

Today, many professions are changing or moving into a platform solutions format. For example, taxi drivers and delivery workers have long been associated with online shopping and smartphone apps. Currently, there is not enough service staff, catering and construction workers, which creates the conditions for the development of a new format of the labor market – platform employment. Such relationships between the employee and the entrepreneur become relevant and in demand in the global economy, especially in the industries with the acute shortage of workers. While the share of the platform economy in the structure of the global labor market is only 3% of the economically active population (about 85 million people), according to the Organization for Economic Co-operation and Development, by 2023, this indicator will reach 5% – about 150 million people. Thus, the largest IT companies in Russia began to acquire services for hiring workers online. For example, SBER bought Rabota.ru, the service platform YouDo started a joint venture with HeadHunter, Avito acquired the GigAnt service. However, in new economic sectors, the Industry 4.0 creates less jobs than previous revolutions. The demand for labor is growing in highly paid creative specialties requiring high qualifications and a high degree of socialization, for example, in developing innovative ideas. In highly developed economies, demand in labor tends to decline in low-income manual work, but this does not apply to developing economies where business is economically unprofitable to replace the cheap physical work of AI and robotization.

Unemployment covers a rising number of population, and this trend will increase as people are liberated from manual labor. According to the International Labor Organization (ILO), in 2020, 114 million people around the world (Bykova, 2021) lost their jobs. According to PwC, until 2025, the global economy will have a steady increase of free workers in the freelance market. Excessive labor is supposed to find jobs through the introduction of new medicine using the Internet Body technology, the extrapolation of a more primitive Internet of Things.

Today, humanity faces a challenge to find a way to balance the advantages and risks of the digital economy and digital platforms. Even E. Musk compared some developments in this area to "summoning the devil" that can destroy humans.

Discussion

The results of studying the tech entrepreneurship, confirm the authors' hypothesis of an ambiguous contradictory impact of the digital economy on the tech entrepreneur, who is forced to quickly readjust, create new business models, explore new global markets, and switch to a new format of business and simultaneously be a consumer, for example, of video games that often deform human consciousness. Not every company or businessman is able to cope with such a task, which leads to their bankruptcy.

In the digital economy, capital is increasingly concentrated and monopolized, which clearly demonstrates the increasing shift to a platform economy where there is sufficient financial capacity to buy the most innovative and expensive startups for the sake of maintaining its monopoly power. Their global influence is strengthened by a huge database of users and by forms of monopolization that even antitrust authorities are sometimes unable to detect. Although, despite this, the authors agree with D. Isenberg, who argues for increasing business opportunities through entrepreneurial ecosystems (Isenberg, 2021).

F. Eggers examines large-scale changes in entrepreneurship caused by the crisis in many countries, and focuses on entrepreneurial ecosystems that ensure the growth and internationalization of enterprises and startups and their entry into the global market (Eggers, 2020). The author notes that ecosystems of different countries are based on different management models and are aimed at supporting startups and fast-growing enterprises. His evidence raises doubts that all ecosystems are formed on the same governance models, while the substantial variability in ecosystems entails new governance models, with which one can only agree. However, the impact of ecosystems on human capital remains outside F. Eggers' scope of study.

One should also agree with the opinion of V.Yu. Katasonov, who argues that "in a platform economy, along with real capital, fictitious capital represented by securities in financial markets becomes more

important, which also becomes a source of crises" (Katasonov, 2015). The authors also agree with the point of view of L. Grinin, A. Korotayev on the tremendous prospects of digitalization in the economy of the sixth wave of innovation (Grinin & Korotayev, 2015). Although with a caveat, because digital technology works mainly against people, it zombifies them, digitalization erodes the identity of individuals, which is beneficial to monopoly capital, digital platforms. The digital economy also has a negative impact on the worker, some of whom become unemployed, while others have to adapt to emerging innovations in a short period of time, quickly mastering new previously unknown professions, which not everyone can cope with. This problem is especially acute for workers of pre-retirement age.

J. Rifkin, in spite of the praise of digitalization, which is changing the structure of the economy with rapidly emerging high-quality communications, criticizes it because in this society, ownership, rather than property, is gradually becoming dominant, demonstrating this through the "economy of shared consumption", which leads to other forms of productive and digital cooperation (Rifkin, 2000). He also talks about degradation of human relationships, showing their increasing dependence on powerful corporate networks, their gaining control over information vital to humanity, and the virtual world replacing the real world. The authors of this paper agree that digitalization is changing human relationships and human interaction, while corporations are establishing control over information, thereby zombifying the individual. At the same time, J. Rifkin's concern about property in the digital society is puzzling, because the "economy of shared consumption" does not lead to its elimination. This model allows only a rational use of resources, reducing the burden on the environment and providing additional income to a huge number of people.

E. Bernays, who made an enormous contribution to the science of mass persuasion based on the manipulation of the individual's subconscious, which was widely used in US commercial advertising, spoke of the enormous importance of communication in this process (Bernays, 1947). The negative impact of his theory on the individual has been adopted today by the digital society, where the manipulation of individual and public mass consciousness leads to the restriction of human freedom, works mainly against the individual, including the entrepreneur and the worker. Their true spiritual, mental needs are mostly not met, and the person themselves as a microcosm does not develop, their natural intelligence falls. "In the digital economy, the search for truth is no longer relevant, its core is the generation of new ideas, values, meanings, it sees the information war for meanings, codes, the struggle between truth and fakes continue" (Yudina, 2021). The digital economy contributes to welfare improvement rather than quality human development according to Florensky (1999). To be human-centered, new technology must facilitate human interaction, transforming the individual into a more harmonious and meaningful being, reducing income inequalities among different segments of the population. Companies as the embodiment of tech entrepreneurship in the new digital reality, and in the West's sanctions war against Russia, need to learn to value people, not to dehumanize people, to stimulate the creativity of the individual, who must quickly solve the complex problems of import substitution.

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CONFLICT OF INTEREST

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AUTHOR'S CONTRIBUTION

Tamara N. Yudina – Conceptualization, Project administration, Writing – original draft
Alexey M. Balashov – Writing – review, Editing

References

1. Ansong, E., & Boateng, R. (2019). Surviving in the digital era – Business models of digital enterprises in a developing economy. *Digital Policy, Regulation and Governance*, *21*(2), 164–178. Retrieved from https://doi.org/10.1108/DPRG-08-2018-0046 (accessed 25.11.2020).

2. Bernays, E. (1947). The Engineering of Consent. *Annals of the American Academy of Political and Social Scienc*e, *250*(1), 113-120.

3. Bykova, N. (2021). How the work will change. *Expert*, (29), 44-49 (in Russian).

4. Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of Business Research*, *116*, 199–208. Retrieved from https://doi.org/10.1016/j.jbusres.2020.05.025 (accessed 25.12.2020).

5. Erickson, T., & McDonald, D. W. (2008). *HCI Remixed. Reflections on Works That Have Influenced the HCI Community.* Boston: MIT Press.

6. Florensky, P. A. (1999). Organ projection. Macrocosm and microcosm. In Works (Vols 4. Vol. 3 (1)). Moscow (in Russian).

7. Geliskhanov, I. Z., & Yudina, T. N. (2018). Digital platform: A new economic institution. *Quality - Access to Success*, *19*(2), 20-26.

8. Grinin, L., & Korotayev, A. (2015). *Great Divergence and Great Convergence. A Global Perspective.* Heidelberg, New York, Dordrecht, London: Springer.

9. Harari, Y. N. (2020). *Homo Deus. A Brief History of the Future.* Moscow: Sindbad Publishers (in Russian).

10. Harrison, S., Tatar, D., & Sengers, P. (2007). The Three Paradigms of HCI. *Proceedings of the 7th ACM Conference on Designing Interactive Systems.* (pp. 1–18). New York: ACM Press. Retrieved from http://people.cs.vt.edu/~srh/Downloads/TheThreeParadigmsofHCI.pdf (accessed 25.11.2021).

11. Hernandez, K., Faith, B., Prieto Martín, P., & Ramalingam, B. (2016). *The impact of digital technology on economic growth and productivity, and its implications for employment and equality: An evidence review. IDS Evidence Report.* Brighton: Institute of Development Studies. Retrieved from https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/12659

12. Isenberg, D. (2010). How to start an entrepreneurial revolution. *Harvard Business Review.* Retrieved from https://hbr.org/2010/06/the-big-idea-how-to-start-an-entrepreneurial-revolution

13. Katasonov, V. Yu. (2015). *Capitalism and the ideology of "monetary civilization".* Moscow: Institut rossijskoj civilizacii (in Russian).

14. Leybin, V. (2021). Artificial intelligence: what it can and cannot do. *Expert*, (49), 42-45 (in Russian).

15. Mechanic, A. (2021). «Rosnano»: in search of a breakthrough that never happened. *Expert,* (49), 19-21 (in Russian).

16. Negrea, A., Ciobanu, G., Dobrea, C., & Burcea, S. (2019). Priority aspects in the evolution of the digital economy for building new development policies. *Calitatea*, *20*(S2), 416–421.

17. Nepelski, D. (2019). How to facilitate digital innovation in Europe. *Intereconomics*, *54*(1), 47–52. Retrieved from https://doi.org/10.1007/s10272-019-0791-6 (accessed 20.11.2021).

18. Novikova, E. (2021). Purring robot waiters. *Expert*, (50), 30-31 (in Russian).

19. Rifkin, J. (2000). *The Age of Access: The New Culture of Hypercapitalism, Where all of Life is a Paid-For Experience.* N.Y.: J.P. Tarcher/Putnam.

20. Rogers, Y., Sharp, H., & Preece, J. (2007). *Interaction Design: Beyond Human Computer Interaction.* Hoboken, New Jersey: Wiley.

21. Schwab, K. (2016). *The fourth industrial revolution*. Moscow: Eksmo (in Russian).

22. Stam, E. (2015). Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique. *European Planning Studies*, *23*(9), 1759–1769.

23. Yudina, T. N. (2021). Digital delusion: high-tech together with high-hume and man. In Yu. M. Osipova, M. I. Lugacheva, T. S. Sukhina, T. N. Yudina (Eds.), *Digitalization and bein*g. Moscow: Ehkonomicheskij fakultet MGU imeni M.V. Lomonosova, 140-148 (in Russian).

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