

Digital totalitarianism - from Homo sapiens to «one-button man»

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Abstract. The article is devoted to the process of digitalization taking place in Russia in the context of the industrial revolution 4.0. The purpose of the article is to consider the process of introducing digital technologies as drivers of the reorganization of the entire way of life of Russian society, the disclosure of the concept of "digital totalitarianism". The process of digitalization affected not only all spheres of the economy, but also significantly affected the development of social institutions and the individual as a participant in this process. To achieve this goal, it is necessary to perform the following tasks: to determine the process of digitalization, to study state projects for digitalization in Russia – "Digital Economy of Russia until 2024", "Education 2030", to study the degree of involvement of Russian consumer and business communities in the use of digital platforms; to determine the consequences of the inevitable digital revolution, and what is the role of the state in them. The object of the study is the process of digitalization of the economy and its impact on human activity. The subject of the research is the specific features of the digitalization process that determine the future prospects of interaction between humans and artificial intelligence (neural networks and cybersystems). The hypothesis of the study: total digital transformation in Russia is the only possible scenario for the development and formation of a completely "new" "state based on the" digital economy", ensuring competitiveness in the global market and improving all spheres of Russian life. The article examines the data on the current level of development of digital technologies in Russia and in the world, identifies the main trends and the most important problems of the development and impact of digital technologies on people.

1 Introduction

At present, the industrial revolution 4.0 and digitalization are no longer a phenomenon, but modern realities. The digital economy is becoming a priority for the countries that are economic leaders to achieve competitive advantages. The business sector is actively

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interested in new digital opportunities, reserving funds for investing in innovations. The Russian community, as well as the world as a whole, is waiting for big changes. Digitalization brings a brave new world – it becomes total. Government services, online shopping and other e-commerce, additional classes, education, communication, and work processes go online. At the same time, each user leaves their own digital footprint, which, along with many others, becomes a large cloud of data collected by entrepreneurs, the state, and multinational corporations. A new generation is growing up, growing up with smartphones in hand and a rich virtual life. In the XX century, the highest value was oil, today its place is taken by information-BigData. At the same time, the society itself is changing, the principles and values are changing.

First of all, it is necessary to define digitalization. Digitalization is a process based on the introduction of innovative digital technologies in all spheres of life and production, reorganization and automation of business processes. A unified definition of the digital economy, both in Russia and in the world, has not yet been developed. It is believed that one of the first descriptions of the digital economy was proposed in 1971 by Robert Bacchalovi, in 1995, the process of the birth of the digital economy was described by Professor Nicholas Negroponte of the University of Massachusetts. In 2017, the World Bank defined the digital economy as a new paradigm of accelerated economic development, based on the exchange of data in real time [1]. By the presidential decree on the approval of the strategy for the development of the information society in the Russian Federation for 2017-2030, the digital economy was defined as an economic activity in which the key factor of production is data in digital form, the processing of large volumes and the use of the results of analysis of which, in comparison with traditional forms of management, can significantly increase the efficiency of various types of production, technologies, equipment, storage, sale, delivery of goods and services [2].

Thus, the digital economy refers to the promotion of digital technologies, as well as the development and distribution of innovative products and services related to them. Digital technology refers to the practice of collecting, processing, storing, and transmitting large amounts of data (bigdata) in electronic form.

2 Materials and methods

The study was conducted on a currently relevant topic. As already noted, the desire to move to the digital economy as soon as possible is prevalent not only in Russia, but also around the world. This race involves the leaders of the modern global market – the United States, China, Great Britain, Japan, Germany, and France. In Russia, this trend has a number of projects approved at the legislative level. For example, the project "Digital Economy of Russia" from June 4, 2019. This project is a national program that includes 6 federal projects aimed at improving the well-being of residents, providing a comfortable digital environment within the "smart" city, improving the quality of public and other services provided through the use of digital technologies. Among the areas in the "Digital Economy of Russia" are: infrastructure, legislative and regulatory environment, personnel and education, digital healthcare, information security, public administration, management system, smart city, research and development. To finance the project, taking into account extra-budgetary sources, 1.627 trillion is allocated. rubles [3].

The essence of the developed program is reduced to the formation of information spaces, the connection of state bodies to the Internet, assistance to employers in providing remote / remote jobs, the widespread implementation of wireless networks, including 5G radio communications, stimulating the development of online education, the use of remote educational technologies, the introduction of electronic educational resources in institutions, improving digital literacy of the population, providing Internet communication

to remote and hard-to-reach regions, the development of the representation of public services in the "online" format, the accumulation of as much information about the population as possible in electronic format, and other innovations related to immersion in the global Internet. Today, a huge number of political scientists, economists, mathematicians, IT specialists, civil servants, and scientists present different views on the ongoing process of digitalization in Russia. Vladimir Putin noted: "... without the digital economy, the country has no future, and its development, ultimately, will be the way to move to the next technological order."

The purpose of the study is to examine the process of introducing digital technologies in Russia in the context of the industrial revolution 4.0. as drivers of the reorganization of the entire way of life of Russian society, the disclosure of the concept of "digital totalitarianism", the specifics of the process of digitalization in Russia.

To achieve the goal of the study, the following tasks were set and solved:

- the prerequisites for the introduction and development of digital technologies in Russia are considered;
- the review of the world scientific and technical achievements in the field of digitalization is carried out;
- information on the main directions of digitalization development in Russia and the study of state projects on digitalization is presented;
- the possible threats posed by the process of digitalization of the economy are identified ;
- the results of the study are summarized.

The object of the study is the process of digitalization of the economy and its impact on human activity.

The subject of the study is the specific features of the digitalization process that determine the future prospects of interaction between humans and artificial intelligence (neural networks and cybersystems).

The hypothesis of the study: total digital transformation in Russia is the only possible scenario for the development and formation of a completely " new "state based on the" digital economy", ensuring competitiveness in the global market and improving all spheres of Russian life.

Comparative, descriptive, and statistical methods of research, as well as the method of analysis, were used to solve the tasks set.

The initial information for the study was scientific data on the subject under study, analytical reviews from the Internet, publications of domestic and foreign specialists.

3 Results

It should be noted that despite the published government decrees with a phenomenal number of digitization measures, the implementation of which is already underway, Russia is not in the leading positions in the implementation of digital technologies, but rather lags behind. Every year, the International Telecommunication Union (IEU) issues a survey of the Information and Communication Technologies (ICT) Development Index ranking, in the latest available for 2017, Russia is in 45th place with 7.07 points. The leaders are Iceland, South Korea, and Sweden [4]. According to the International Digital Economy and Society Index (I-DESI), which reflects the digital economy and society index for analyzing trends in digital indicators of European Union countries in comparison with non-EU countries, Russia ranked 12th among non-EU countries, ahead of Turkey, China, Mexico, and Brazil. In the global ranking compiled by the International Digital Economy and Society Index, Russia received an index above the average minimum European indicator [5].

The Bloomberg publishing house annually publishes the rating of the most innovative countries in the world, the Bloomberg Innovation Index. The rating is formed by experts on the basis of several factors: investment in research and development, production capacity, the presence of high-tech companies, the number of patents and the added value of production, the level of education. The latest rating was released on January 18, 2020 – Russia ranks 26th, one point higher than in 2019. The first place is taken by Germany. Also in the top 10 are South Korea, America, Denmark, Japan, Finland [6].

According to another world ranking of digital competitiveness, World Digital Competitiveness ranking, Russia dropped from 38th place in 2019 to 43rd place in 2020. The top three are the United States, Singapore, and Denmark. [7]

Thus, Russia's digital competitiveness at the global level shows disappointing results. Among the main reasons, there is a low concentration of companies that have transformed their business, an insufficient flow of investment in developments and patents, and almost no funding for science. Also, experts often highlight the unfavorable atmosphere for digitalization, the lack of a legal framework and legislative regulation of its provision, especially with regard to the issue of information security guarantees.

In order not to be among the laggards, Russia chooses the "catch up and overtake" course, building a program of accelerated implementation of digital technologies in all spheres of life, as evidenced by numerous development strategies.

Among the obvious positive consequences of digitalization are usually distinguished:

- improving the quality of life of the population by meeting the needs more effectively;
- the emergence of new opportunities to improve the efficiency of organizations;
- the possibility of direct communication between the manufacturer and the buyer by eliminating intermediaries;
- optimization of expenses related to the costs of marketing companies, events for the promotion of goods and services, consulting services;
- improving the efficiency of business processes.
- a deeper understanding of consumers, the willingness to quickly adapt the offer to the changing tastes of consumers;

Also in the field of technological aspects of digitalization, such advantages as the final transition from paper to electronic media, cloud, and the ability to process large amounts of data with new technologies are highlighted.

The business has already started optimizing business processes and attracting innovative technologies. Innovative technologies based on data collection and analysis are successfully used in trade, for example, stores without customers with sensors that record movements and views; AGV carts in warehouses and AR technologies and digital counterparts in logistics. CRM systems and B2B platforms for retail and wholesale businesses are being implemented. More and more e-commerce platforms and marketplaces are appearing. Chatbots and content personalization are used. Among the technologies being implemented in the business space, solutions are in priority (according to the analytical study KMDA 2020 in Russia)[8] in the field of digitalization of business processes, data-based management, customer experience management, etc. The development of innovations is in the last place in the rating. Among the implemented solutions, artificial intelligence and mobile networks are leading the way. The leaders are e-health, the Internet of Things, robotics, informatization of society, and cloud technologies. In 2020, a system was launched that offers preferential loans to companies with both public and private participation in the field of investing in the implementation of IT solutions. Entrepreneurs note the following difficulties in the field of digital transformation of companies: the lack of qualified personnel, the resistance of the company due to the fear of change, uncertainty in the return on investment, as well as the lack of proper knowledge to form a strategy.

One of the most successfully transformed areas is banking. German Gref, the head of Sberbank, speaks about the digitalization of business in the banking sector as "the key to survival". Sberbank is moving in the direction of developing its influence – at the moment it controls almost half of the deposits of individuals, as well as 40% of retail lending. The development of an online application, the diversification of activities - now Beber also carries out the delivery of products, a powerful marketing system aimed at both pensioners and the younger generation who tend to take out mortgages. In the strategy of Sberbank until 2020, the main goal was to go beyond the provision of financial services, moving away from the prefix "bank". Sberbank should not be associated only with the bank-now it is an ecosystem, that is, a single information technology platform that generates an offer to customers and access to it. Examples of such ecosystems are Google, Amazon, Facebook, AlibabaGroup. Indeed, in 2020, Sberbank conducted a large-scale and expensive rebranding, getting rid of the word "bank" in the name. The same ideology is supported by Tinkoff. BEAC is also actively developing in the direction of collecting biometric data. And although the state EBS (unified biometric system) has already been created under the authority of the Central Bank and Rostelecom, the BEAC plans to develop its own, more advanced one. SBERBANK has already created a system for collecting biometric data for legal entities, which is also available to partner companies of Sberbank, and any legal entity can connect to it. Beac is also active in the digitalization of education. It is noted that his influence on the cultivation of a new generation, he showed in the creation of children's virtual maps and applications. Now any parent can issue a Sber card for a child, but only a virtual one with the ability to pay for purchases, parents can set limits. At the same time, educational educational programs are implemented in the application in a playful way.

It should be noted that in the projects on digitalization of the economy, Beac, including the Skolkovo Foundation, Rostec and Rosatom, will receive a large part of the budget. BEAC is also actively implemented in educational activities. He already owns the "School 21", copied by agreement with the French "Association 42". A new approach to education, supported by both Herman Gref and the Rector of the Higher School of Economics, is the training of new narrow – profile specialists who are tailored to the activities of a particular company. The approach in Association 42 is exactly this. In France, the university was founded due to a lack of qualified IT specialists, and the founder did not have the task of providing a systematic education, but only to train specialists for his company. These innovative educational institutions are based on the absence of teachers on the principle of "equal – to-equal", tests of logic and motivation are conducted at admission, the educational process consists in completing tasks, writing codes and searching for information both individually and in group projects. Knowledge control is carried out by the IT platform. Beac's cooperation is expanding, through the introduction of regional universities. For example, Tomsk State University has become a strategic partner, where Beac employees give lectures on the values of digitalization, Beac also participates in organizing practices and improving the skills of employees. Obviously, the contribution of the BEAC to the digitalization of the economy is very large. In addition to transforming his own activities, he invests in research projects and developments related to digitalization.

Since 2019, the BEAC begins to function as a multifunctional center, which provides it with access to a huge database of Russians, while the author of "Digital totalitarianism – how it is done in Russia" Chetverikova O. N. noted that no other developed country in the world has allowed itself to do this. And already today, the BEAC is taking the initiative in issuing electronic passports. [9]

The introduction of digital technologies is in full swing, the transformation of life dictates new rules for being constantly online, and this means in the global information space, of which every user is already a part. According to RBC, at the end of March 2020, Internet use in Russia increased to 30% compared to the same data at the beginning of the

year. The covid-19 pandemic has made its own adjustments, increasing the number of users of the Internet space. Research agencies note that more than half of Russians-59% - had to master new digital technologies, and 41% of respondents noted that they could not master innovative Internet platforms.

According to the statistical collection "Indicators of the Digital Economy-2019", compiled by the Higher School of Economics together with the Ministry of Digital Development, Communications and Mass Media of the Russian Federation and the Federal State Statistics Service, in 2018 Russia is in 34th place in terms of Internet access in households (77%). In the first place, the Republic of Korea (99%). Most of the Internet is accessed via mobile devices and tablets, less often using laptops and computers. It is worth noting that the predominant use of the Internet via cellular communications (59.8%), less often with the use of wireless communications (32.8%). Most often, the population uses the Internet at home and at work. Among the factors hindering the use of the Internet are the lack of necessity (in the urban population – 16.3% of households, in the rural population- 21.1% of households), there is also a factor of high costs and lack of technical capacity [10].

As for the digital literacy of the population, more than half (52%), according to the NAFI Digital Literacy Index, estimate the level as average, a third – low; only 9% of Russians named the high level. The digital skills of the population, according to the research of the Higher School of Economics, are basic – the formation of a text document, sending messages by e-mail, using video and photo editing programs, as well as working with tables. The purpose for which Russians use the Internet was also identified in the study of "Indicators of the Digital Economy" - the 1st and 2nd places are the use of social networks and the search for information about goods and services (77.8% and 54.1% of the total number). The goal of obtaining knowledge is at the 6th stage (39.7%), distance learning is at the 19th place (3.1%).

In 2019, the Institute of Fundamental and Applied Research of the Moscow University for the Humanities conducted a study on the attitude of Russians to digitalization. It is worth noting that the main strategies for creating a digital society are aimed at the younger generation up to 20 years old. Among this age group, 36.3% of respondents believe that the ideas of the "smart city" and others will quickly become uninteresting to society, and 36.6% of the same age group do not believe that digitalization can neutralize wars, natural disasters and other possible trends of destruction. It should be noted that the respondents speak negatively about the introduction of digital television, believing that this innovation has benefited only television companies (41.1%) and the focus of modern television on influencing the consumer in the promotion of products (24.1%). Recently, however, there has been an increase in advertising on federal channels in the format of "shop on the couch". It is also noted that the respondents do not support the idea of digital education and the rejection of the usual teachers in favor of robots.

It can be concluded that the state is aimed at a total transformation in the future, possibly without alternative. The main course is the transition to the digital economy through the introduction of digital technologies and platforms in all spheres of life. Business is positive, while expressing concerns about the protection of information in the global digital space. But the scientific community and the population are wary of the digitalization process. All innovative technologies, Internet platforms and systems are based on Western software. Russia is far behind in creating its own software, and there is practically no such thing. This increases the state's dependence on Western technologies, as well as undermines confidence in the safety of information in the global space.

4 Discussion

Digitalization is a paradigm of the new time, it is inevitable, the population is advised to understand it and accept it. But at the same time, questions arise about the preservation of the right to privacy and freedom of choice, about the impact, still not fully understood, on human health. This leads to "digital totalitarianism", that is, a violent transition to digitization without any alternatives. There are also well-established expressions of "digital slavery".

The problem of digital totalitarianism was clearly revealed in her work "Digital totalitarianism. How it is done in Russia" Chetverikova O. N. is a Russian scientist and writer who studies political and religious phenomena. The author describes the current situation around digitalization and digital technologies from the point of view of the state's plans for the redevelopment of the education sector, as well as the activities of such major players as Google, BEAC.

The author examines the course of globalization through the prism of religious movements, citing the example of the 1980s and 1990s, when a large number of neo-religious and similar organizations emerged. Such a "new" religion was the new Agers, who promoted the idea of global thinking: the unity of the world, religion, rules-which is very similar to the processes of globalization and the unification of information arrays. It is noted that the main idea of digitalization in the end is the singularity – the moment when the capabilities of the human brain will be exceeded by artificial intelligence. This will be the beginning of a new world order. For these purposes, a large-scale breakthrough in the technological level is needed, for which more and more new development centers are being created, Western experience in using technologies is being adopted, and a new generation is being nurtured, growing up with technology in hand.

The author notes the processes of involvement of the Internet network in the personal life of each person and its impact on the ability to think, on the system of human behavior. Hence the saying "one-button man". This is how the largest players in the Internet space want to see the population: Google, Facebook, etc. In his speech about the company's capabilities, Eric Schmidt, the head of Google, expresses the idea that every user, being at home alone, is never really alone – there are always technologies with him that listen to him, see him and mark him. Google doesn't need users to click a lot of buttons – it knows what a person is thinking, where they are, and even what they want. As the head of Google notes, users do not just want to get information - they want Google to think for them.[13]. Eric Schmidt also notes that in the hands of Google there is all the information about users, it is also available to the state – "You are never alone, and you are not bored...". The task of such companies is to make a computer a friend of a person who will think ahead and generate new needs in a person's head. Such is the influence of modern Internet networks.

Chetverikova O. N. gives statements about the real impact of digitalization on the improvement of the economy. Head of the Department of the Institute of Applied Mathematics of the Russian Academy of Sciences. Keldysh Professor G. Malinetsky raised the question of the beneficial effect of the digital economy in the Russian Union of Industrialists and Entrepreneurs: the question was which of the 9 presented areas of development will actually have an economic effect, but none of them. ZhoresIvanovichAlferov also expressed thoughts about the digital economy: "It is absurd to talk about a digital economy without having an element base"[9].

Research in the field of developing anti-crisis measures to achieve the proportionality of the economy in the context of the global crisis was conducted by a cybernetic economist, professor of Moscow State University Elena Veduta. The author expressed her opinion on the modern prioritization of digital transformation. Elena Veduta draws attention to the fact that monetary measures (developed economic models for forecasting and planning the

economy by the international system of national accounting) and institutional measures (economic regulators depending on the cyclical phase "inflation-deflation») how ways to get out of the crisis do not bring the proper result and are already outdated. At the same time, the transition to the digital economy carried out in Russia will not lead the country to get out of the global crisis and create a new era of globalization.[14]. According to E. Veduta, modern digitalization is a race with the substitution of concepts. The main structural changes in the organization of financial flows remain the same – the same economy of consumption with only one adjustment for the virtual interaction of the buyer and seller.

The possibilities of innovative technologies can provide the economy to reach new levels, but for this, according to the author, it is necessary to turn again to the basics of economic knowledge, to economic and mathematical modeling. [15]. To get out of the global crisis, it is necessary to recall Marx's theory of reproduction, which describes objective economic laws – economic and mathematical models are based on the theory of reproduction to build a cybersystem that allows us to reach a new stage of economic progress. The priority should be the task of strategic planning of the economy. Instead, the trend of digital obsession with the automation of business processes and the widespread introduction of wireless technologies is developing. K. Marx considered objective economic laws (accumulation, cost, saving time, forming the price of production, and so on) as elements of the mechanism of functioning of the economy, developing under the influence of scientific and technological progress. According to the author, modern IT solutions, with their competent use, allow us to develop economic and mathematical models that would simulate objective economic laws, to create an economic cybersystem that can overcome the global crisis and achieve social progress [11].

Nevertheless, the management of the economy is entrusted to chaotically operating artificial intelligences, which, with an abundance of heterogeneous data, but without understanding the ways out of the global crisis, should lead to the moralization of globalization. K. Schwab, economist and president of the economic Forum in Davos, noted the transformation of the digital transformation process into the systematic introduction of disruptive technologies for automating business processes. This approach can lead humanity to the redistribution of the labor market due to the disappearance of many professions, access to large amounts of information, the development of additional measures to track the population by the state and the robotization of humanity [12].

Chetverikova O. N., mentioned earlier, also reflected the current situation of education transformation, which raises concerns from the scientific, pedagogical and parent communities.

The government project "Education 2030" is aimed at fundamental changes in this area. In Moscow, since the beginning of 2016, a project on the digitalization of schools – the Moscow Electronic School "MASH" - has already been implemented. The essence of the project is the introduction of electronic diaries and journals in schools, notifications to parents, as well as providing schools with electronic whiteboards, computers and tablets of the teacher, Wi-Fi access – this is the hardware part of the "MASH". The software part of the "MASH" implementations includes network access to downloading materials for further demonstration, and a library of materials. The pedagogical community calls this process the complete destruction of education, since the introduction of such technologies radically changes the course of the pedagogical process, educational standards. The article considers the transfer of all available information for digitization to the network to create individual profiles of students in the future, the introduction of online pedagogy, new pedagogical tools that review the course of the pedagogical process - the "peer-to-peer" approach, learning through virtual games, the replacement of paper textbooks with interactive digital textbooks that analyze the student's assimilation of the material. Another plan in the

transformation of schools is the abolition of the 5-point assessment system and the transition to a 100-point one, but the teacher will evaluate not only knowledge, but also competencies – homework, activity in the classroom, absences, current control, final control.

The main round of transformation is a departure from classical education and comprehensive development. In schools, it is planned to transform the Unified State Exam in accordance with the requirements of employers. As for universities-to move to a completely new level of training, where students will be trained only on certain skills determined by future employers. That is, employers will cultivate employees for themselves-narrow specialists, sharpened for certain tasks. The so-called "one-button" people.

Higher education institutions are also expecting big changes. First of all, distance learning and distance courses come to the fore. Already today, the online education market has reached 38.5 billion in the B2C segment and is expected to reach 60 billion by the end of 2023. Higher education institutions will be required to translate more and more subjects into an online format. The rector of the Higher School of Economics proposes to ban teachers who do not have research papers in their subjects from teaching disciplines, and instead replace the disciplines with online courses from leading universities in the world. NeoAnalytics specialists identify the most successful areas in the distance education environment – digital solutions based on simulations of real processes, game forms of education. For universities, new forms of accreditation are even being developed – the basic, advanced and leading levels. The level is assigned depending on the degree of use of distance education technologies, the transfer of basic subjects to an online format.

There are plans to introduce an individual career path – artificial intelligence will analyze the child's progress on the materials that he learns, load him with additional tasks that are lacking. The program for collecting personal information will start from childhood from 0 to 3 years with the help of the organization of patronage and the creation of personal electronic cards. Further, the maps will be supplemented in schools. By the end of the school, artificial intelligence, based on the processing of all available information, will have to work out a decision – in which direction to continue a career in a higher educational institution. It can be assumed that as a result of the transformation of society, every person is waiting for the "digitization" of their life path. Such a data collection system resembles the citizen's trustworthiness indices developed in China – a rating representation in which behavior and actions will be displayed. The fact of any violations, negative emotions will be preserved by artificial intelligence, which in the future may become an obstacle, for example, for getting a job. So far, this is being done in testing mode [9].

Chetverikova O. N. draws attention to the direct impact of the transformation of education on the education of new generations. The desire to replace teachers with artificial intelligence, the need for children and adolescents to spend even more time with a computer, the spread of wireless communication points – what impact can these technologies have on the health and development of children, adolescents and the entire population? Researchers on digitalization issues note that while America, France, and Germany are increasingly publishing reports on the dangers of wireless devices and networks (France was one of the first to regulate the use of wireless networks in kindergartens and schools at the legislative level), Russia ranks 2nd (according to the UN) in the number of wireless Internet points and 1st in the transfer of various services to electronic format.

Experts in the field of radiation are constantly studying the impact of wireless devices and a wireless Wi-Fi network on the human body. It is noted that long-term exposure to radio-frequency electromagnetic fields that emit such devices can serve the development of tumor diseases, behavior disorders in children, migraines and other diseases. The impact is

not fully understood, and the scientific community warns against the negligent use of these technologies. The Parliamentary Assembly of the Council of Europe requests the use of wireless technologies, especially for young people, according to the ALARA principle developed by the International Commission on Radiological Protection, which means "as low as reasonably achievable".

The teaching community is concerned about the introduction of innovative technologies, the digitalization of schools and the redevelopment of the entire educational system. First of all, the role of the "teacher" as a mentor, friend and teacher will be reduced, the teacher will become an intermediary between the interactive whiteboard and the tablet of the child, while the "personality is brought up by the personality". The convergence of children with technology in the educational process, as well as the introduction of tablets, will reduce the quality of reading, since it is written literacy that forms the basic reading skills: the hand writing with a pencil repeats the outlines of letters, traces the motor memory traces and helps to visually recognize letters. Another consequence of digitalization is called autism, a disease that has become much more common. Most of all, autistic people began to appear in the leading countries in terms of technological breakthroughs-South Korea, the United States. The use of information technologies leads to the loss of the ability to think and reason independently, to make decisions. Research is constantly being conducted on the impact of the Internet on the psyche of children, on the appearance of alienation from real life, loneliness in the network and suicidal thoughts. Digital technologies will teach children to think, replacing the transfer of knowledge from older to younger – by searching for information on Google.

It is obvious that modern technology has a detrimental effect on both the physical and psychological health of children and adults. Germany ranks computer work among the most harmful professions. A modern person spends several hours at the computer every day. Total digitalization will lead to even more hours on the Internet, which means stress, eye disease, and nervous disorders. In connection with the growing consumption of modern technologies, the science of psychology should reach a new level – to contribute to the development of society, to prevent its degradation.

5 Conclusions

The article discusses the main aspects related to digitalization. National project "Digital Economy of the Russian Federation", the main directions of digitalization-education, social infrastructure. The article analyzes data on digital transformation of business, the degree of involvement of the population in the Internet, reveals the meaning of digital totalitarianism, its manifestations in the private life of the population, negative aspects of the reorganization of the education sector, the impact of modern devices on the health of children and adults. The entire world community is faced with the need to develop international rules and ethical standards that form the legal basis for regulating artificial intelligence technologies, security and ethics issues, and certification by developers of their systems for compliance with various levels of reliability and security. This will entail changes in legislation both at the level of individual countries and on a global scale.

Summing up the results of the study, it should be noted that the process of digitalization of the economy proceeds unevenly, often giving rise to a number of problems. Modern Russian society faces new challenges, the biggest of which are not only Russia's lagging behind the world leaders in the field of digital technologies, but also a number of related problems: the difficulties associated with the reorganization of business, the harmful impact of modern technology on the physical and mental health of people, the threat of digital totalitarianism.

Digital totalitarianism is a new reality, in the pursuit of which every person must be able to keep his soul and heart in himself. In order not to become a "one-button" person, it is necessary to develop self-control, monitor psychological health and be socially free – to use the Internet within reasonable limits, not to teach children to it and develop thinking, because homo sapiens is a reasonable person. People don't want to be manipulated when they have knowledge.

References

1. Digital agenda of the Eurasian Economic Union until 2025, prospects and recommendations, <http://documents.worldbank.org/curated/en/413921522436739705/pdf/EAEU-Overview-Full-RUS-Final.pdf>
2. *Decree of the President of the Russian Federation on the approval of the strategy dated May 9 (2017)* <http://kremlin.ru/acts/bank/41919>
3. *National project "Digital Economy of the Russian Federation" dated June 4 (2019)* <https://digital.gov.ru/ru/activity/directions/858/>
4. *International Telecommunication Union: ranking of countries in the world by the level of development of information and communication technologies - Index of development of information and communication technologies (ICT Development Index)* <https://gtmarket.ru/ratings/ict-development-index>
5. *Publishing group Profi-press: Russia and digitalization trends. Magazine Boss-IT*, <http://www.bossmag.ru/archiv/2019/boss-sentyabr-oktyabr-2019-g/rossiya-i-trendy-tsifrovizatsii.html>
6. *Bloomberg Innovation Index*, <https://www.bloomberg.com/news/articles/2020-01-18/germany-breaks-korea-s-six-year-streak-as-most-innovative-nation/>
7. *The IMD World Digital Competitiveness Ranking (2020)* <https://www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2020/>. (Date of treatment: 03/20/2021);
8. *KMDA: Digital Transformation in Russia (2020)* https://komanda-a.pro/projects/dtr_
9. O.N. Chetverikova, *Digital totalitarianism. How it is done in Russia* (Publishing house of the Book World, Moscow, 2019)
10. G I. Abdrakhmanova, K.O. Vishnevsky, L.M. Gokhberg et al, *Indicators of the digital economy: 2019: statistical collection* (NRU HSE, M., 2019)
11. E.N. Veduta, *Standards and Quality (2019)* http://spa.msu.ru/uploads/files/nautchnaja_dejatelnost/_05_2019_small.pdf
12. E.N. Veduta, T.N. Dzhakubova, *Electronic bulletin 57 (2016)* <https://cyberleninka.ru/article/n/ekonomicheskaya-nauka-i-ekonomikomatematicheskoe-modelirovanie>
13. L. Desfontaines, Y. Semenova, *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision*, 4582-4585 (2020)
14. E. Korchagina, L. Desfontaines, A. Kurochkin, et al, *IOP Conference Series: Materials Science and Engineering*, International scientific conference "Digital transformation of production, infrastructure and service" **940** (2019) <https://iopscience.iop.org/issue/1757-899X/940/1>
15. E. Romanenko, V. Yaluner, S. Strinkovskaya, et al, *Apuntes Universitarios*, **11(2)**, 144 - 158 (2021) <https://doi.org/10.17162/au.v11i2.637>