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**Global Challenges and Prospects of the Modern Economic
Development**

**NEW CHALLENGES OF THE DIGITAL ECONOMY: SOCIO-
CULTURAL CONSTRAINTS**

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Abstract

To date, the digital revolution has covered almost all types of activities and involved most of humanity in its orbit. Building a digital economy with an emphasis on solving the problems of developing social institutions that are adequate to the conditions of the digital economy is the current task of our society. But the authors of this work see some problematic challenges in the development of the digital economy. They are: the disproportionate development of low-tech sectors of the economy; de-intellectualization of human activity; dehumanization of society. Another challenge is the substitution of concepts when the connotations of "Big Data" and "Digital Economy" are equated. The aim of this work is to study the impact of modern digital technologies on the social and cultural environment people exist in. The authors of the study consider how the introduction of advanced digital technologies leads to some changes in the sociocultural environment. The authors give the reasons for this happens. So it becomes necessary to find out why the introduction of digital technologies has not only a positive, but also a negative impact on the sociocultural environment in which a person is located. The results of this study can contribute to the development of new technologies, taking into account their social and cultural consequences, which will help in the further formation of a scientific culture of using digital infrastructure.

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1. Introduction

Today, digital technologies are an integral part of the socio-cultural life of every person. Every day, progressive technologies offer modern prospects for use and fresh solutions to pressing problems. These include:

- the use of social networks;
- the possibilities of digital medicine, commerce;
- distance education;
- public services in a single window mode. A large number of other possibilities is also

suggested. The latest digital technological solutions make it possible to satisfy a wide range of user needs. But such solutions carry problems for modern society, for which the principles of privacy are the main element of freedom. The digitalization process in modern conditions of the unpreparedness of social institutions and the low level of penetration of digital technologies in production can lead to negative changes of sociocultural environment in which the person lives.

2. Problem Statement

Digital technologies are directly dependent on a priori selected and accepted models, but are offered as an effective tool to assist in decision-making in various social areas of human activity, thereby contributing to the gradual elimination of a person from the decision-making process, giving this privilege to the program. That is, the various social spheres of human activity are not controlled by the human mind, but by a program whose construction model cannot be considered ideal or acceptable for all members of society.

Man, as the central figure of society, is relegated to the background in the decision-making process, becomes irresponsible. And as mentioned above, there is no need to accumulate, process and possess knowledge – knowledge is universally available. Thus, a person is transformed from a subject of the social system into an object of the social system, whose activity is determined by digital technologies: digital tracking and control systems, digital management systems and organization of activities. Moreover, the opportunities provided by digital technologies. for example, the possibility of using the "single window" service, the possibility of using video applications to perform in front of the public instead of a live, independent performance, the possibility of continuous communication in social networks contribute to the loss of communication skills, contribute to the development of social phobias, since there is no need for direct communication.

Therefore, it is necessary to create and develop social institutions that meet the needs of digitalization. Norms and criteria for evaluating behavior and morality should be formed. Standards and criteria for the evaluation of behavior and morality should be developed. Standards for the use of big data and artificial intelligence should be established.

3. Research Questions

In the process of digitalization of society, a number of issues arise for research work and discussion. The first question is: what are the criteria for selecting the information that later forms the

database structure? The next question is: do these criteria contain bias, selectivity, and pre-developed judgments of people? The other point is: can different people influence the selection of criteria, thus solving their individual tasks and pursuing their own interests? And finally: do these criteria meet the sociocultural requirements of the society, the sociocultural norms of this society, and do they violate the institutional sociocultural structure? When discussing the criteria for information availability one should remember about the entire set of criteria. This set includes the established rules for data transfer between different data and access to the final databases and it also includes the criteria for possible interpretation of the information received.

4. Purpose of the Study

So there are a lot of challenges digital economy suggests when we speak about the sociocultural environment in which people are located. The authors regard challenges of the digital economy as problem processes. In the authors' opinion these problem processes could be divided into several groups. The first group includes:

- a decrease in human intellectual activity;
- a drop in the level of cultural development of a person.

The second group is connected with the processes of dehumanization of society:

- the development of sociophobia;
- the alienation of man from society;
- human activity robotization.

In connection with the identified problem processes, the idea of this paper is to find out why the introduction of digital technologies has not only a positive, but also a negative impact on the sociocultural environment in which people are located. For this the authors used different scientific research methods.

5. Research Methods

In this work, the authors use general scientific research methods. First of all the paper involves observation method. This method suggests deliberate, purposeful perception of digital technologies phenomenon described in this work and it also includes the perception of the processes connected with this phenomenon in their real form. So this method also suggests the collection of facts that occur in reality. Theoretical method and descriptive research method are also used. Within the framework of the theoretical method there exists a comparative analysis as the paper compares digital technologies used in different areas of human life. Besides the paper compares the features of the use of digital technologies in terms of the socio-cultural aspect. Descriptive research method presents digital technologies and their application in the sociocultural aspect.

6. Findings

The most commonly used meaning of the digitalization process implies a socio-economic transformation or transition, due to the widespread introduction and application of the latest developments- digital technologies that can create, adapt, and transmit information (Mitin, 2017). Modern

digital technologies, according to the national technology initiative, include neurotechnological developments, artificial intelligence, quantum solution technologies, modernized production technologies, including industrial Internet resources, virtual and augmented reality capabilities, wireless communication services, and robotics development programs (National Technology Initiative, 2018). There are two main concepts that characterize the process of digitalization at the moment: big data, and the second-the means of forming, storing and processing big data. The term "Big Data" is understood primarily as social networks and the Internet in general. Also, "Big Data" includes science, retail and medicine. Source data as a means of generating, storing and processing big data can be absolutely anything, differing only in the large amount of processed information. Big data is the result of processing and interpretation of information arrays, and the process of processing and interpretation is closely related to the nature of information search and analysis algorithms. And, as a result, big data becomes dependent on a priori judgments embedded in the algorithms themselves even before the analysis (Silva et al., 2019). That is, first a person forms algorithms for digital technologies, and then these digital technologies begin to shape a person's life. Using digital technologies, human knowledge depends on a prior set of models and judgments. So there is a doubt about the nature, reliability, and differentiation of the processed knowledge bases that digital technologies carry. As a consequence, there is a fact of replacing the concept of "knowledge" with the concept of "Information».

The use of digital technologies simplifies visibility and thus makes knowledge available, for example, audiobooks do not require reading them, thus eliminating the need to be able to read in order to learn something, educational videos allow you not to record material, because it is possible to view it several times; the need for writing is also eliminated, but the informal institution of human knowledge is destroyed-knowledge as an indicator of culture and knowledge as a process of human mental activity, there is a substitution of cause-and-effect relationships with correlative relationships, which leads to incorrect judgments and conclusions (Lammi & Pantzar, 2019). As a result, the Institute of universal accessibility of previously acquired knowledge is being developed. The destruction of human knowledge, the institution that is the basis of human society – is a serious negative consequence of the development and application of digital technologies in modern society.

It does not matter how significant or insignificant the information contained in the big data database is, the nature of the results of their application is determined by a number of officially established social factors. Therefore, it is necessary to create public regulations that control the creation of a big data database. They should form tasks for tracking, processing, and storing data; control the purpose of which is to monitor the performance of activities.

Many organizations express a strong interest in collecting personal data. However, the system of organization of personal data protection creates an obstacle to their use. Search and collection of personal information has become the basis of competition between leading Internet companies such as Google, Facebook, Apple and Microsoft, because relying on digitized personal information can create a huge growing new segment of the information market. In response to the unregulated transmission of information, there is a need to eliminate or correct this information, hence a new type of right - the right to forget information (Dufva & Dufva, 2019).

At the moment, digital technologies that contain huge databases suggest a potential loss of anonymity. A powerful amount of information has already been collected for each individual in the society (in digital terminology, a digital footprint), and if necessary, it can be used as a basis for compiling the necessary databases, representing potential knowledge. The simplicity and ease of use and sufficient cost-effectiveness of digital technologies are the reason for their widespread introduction, including in those segments of the economic sphere that are considered to be low-tech. Currently, these are the sectors of the economy that are favoured in the context of the development of digital technologies. Consequently, these industries are developing. Uber services - delivery of goods, taxis, carsharing, etc. Thus, there is a tendency to increase the efficiency of human resources, while reviving the social institution of hourly labor, which is characteristic of the period of early capitalism (Phillips et al., 2017).

Digital technologies cause changes and sometimes destruction of basic, tacitly accepted phenomena in society, which are perceived by everyone as foundations or traditions. Digital technologies make it possible to conduct large-scale social experiments on a person without their knowledge. There is a large amount of data about the destruction of tacit public institutions (traditions) associated with the digitalization of society that already exists in society. For example, it is traditionally assumed that medical experiments are not carried out on a person, and it is difficult not to notice the fact that such an experience is carried out. However, experiments with a person's personality are carried out, even without their knowledge, and this is the reality of our time.

The decline of social foundations implies the degradation of knowledge, skills, and skills that people use in the course of their existence in society. Therefore, digital progress creates direct prerequisites for the degradation of human capital. One of them, the most significant prerequisite is the production of "new knowledge" that is not actually such. Taking as knowledge the proposed databases, which are compiled based on presuppositive assumptions and biases, there is an installation on the displacement of real knowledge to the periphery.

Mastering the imaginary "new knowledge" is absolutely not connected with the development of a comprehensive correct perception of the world. Therefore, new scientific and technical personnel lose the qualities that society has used to gain the benefits of so-called technological progress over a long period of time. Today, "thanks" to digitalization, there is an attempt to automate and formalize the field of scientific research, which is essentially intellectual creativity, and creativity cannot be systematized and forced to exist in an automatic mode. The same can be said about the education system, which, based on digital simulations of laboratory indicators in the conditions of personal development, returns society to the stone age and educates primitive consumers, intellectually and spiritually undeveloped members of society, whose thinking and behavior is controlled by information technologies and advanced psychotechnics.

With the increasing role of digitalization of society, the stability of modern public institutions is being questioned. Digital technologies, allowing virtual reality to control our consciousness, tend to move human thinking into the field of associative thinking, while eliminating the algorithmic thinking system, giving such an opportunity to think to a program that makes decisions automatically, without human control. This allows the program itself to manage and control the person.

Throughout the entire path of creating a big data database, there is a possibility of preferences, interests, misconceptions, and unsubstantiated judgments. This creates a problem of correctness and integrity of knowledge. One of the decisions is the concept of "open science", that means using big data databases in science with the rights holders such as the state, multinational companies, scientific organizations. This decision lets exempt knowledge from restrictiveness that some analysts define as the concept of "nobody's data" (Silva et al., 2019).

When describing digital technologies, we can say that they have adaptability and are quickly transformed, but at the same time their essence is making simple decisions, so to speak, on a model. And this pattern is not always effective, and sometimes erroneous. This state of affairs does not mean the negative impact of digital technologies themselves, but determines the specifics of their application and duplication. This is joined by trust in information that is mediated by an algorithmic method or established rule, which is already an established norm of modern society (Dufva & Dufva, 2019).

Thus, today, in the context of the process of digitalization of society in the economic sphere, priorities are given to the development of low-tech sectors but there has been a change in the social structure of society in the direction of degradation which means the way for the development of opposite trends: the fall of established social institutions, changes in the structure of the economy for the worse, and the loss of human capital. How does this manifest itself in a person's socio-cultural activities?

Digitalization of society suppresses the manifestation of external and internal individual aspirations of a person. Unregulated digitalization leads to indirect communication, the lack of need and desire for direct communication with colleagues, the immediate environment, and even with family members; this behavior becomes the norm and a rather dangerous social phenomenon. Visibility of communication in social networks does not make people closer but pushes them to loneliness. Anonymity and thus lack of control on the Internet have many negative consequences: virus attacks, theft of funds, and the dominance of immoral content.

With the development of digital technologies, the spiritual sphere of life takes a back seat. The deeper digital technologies are changing the world, the more they contribute to the emergence of unexpected social factors shaping new institutions of public life, that completely change a human being and not for the better: level of consumerism is growing, regressing the human value system, a person becomes a slave of the information society: in pursuit of information people are not paying attention to the surrounding real world.

7. Conclusion

Drawing a conclusion, we have to say that digitalization in the socio-cultural aspect implies the need for the creation and rapid growth of new social foundations and traditions, so-called public institutions. The content side of new projects must be concentrated on the person as a person. But this, unfortunately, does not happen. Traditional social institutions are under pressure from new trends and are already playing a secondary role. Therefore, there is a threat of their dehumanization. Big data technologies, without producing new knowledge, are nevertheless widely used to obtain all kinds of information and influence decision-making processes. The issues that arise in this way related to the

storage and transmission of large amounts of data do not take into account the need to extract quality new knowledge from this volume of information.

One should consider past experience as a solution to the challenges that arise in the process of digitalization. For example, the use of the inductive method, in particular Case Law that captures the established tradition, can help in solving problems related to digitalization. In practice, the society is waiting for some event to start regulating this area. It is necessary to regard "Big data" as a model of new world and the main challenge is to decide what its positive and negative sides are. This leads to the conclusion that it is necessary to use social criteria for managing advanced technologies. Though, we should not forget that such problems have occurred before, therefore their correct interpretation in terms of new terminologies and in accordance with the modern demand is required.

References

- Dufva, T., & Dufva, M. (2019). Grasping the future of the digital society. *Futures*, 107, 17-28.
- Lammi, M., & Pantzar, M. (2019). The data economy: How technological change has altered the role of the citizen-consumer. *Technology in Society*, 59, 101157.
- Mitin, V. (2017). Seven definitions of the digital economy. <https://www.crn.ru/news/detail.php?ID=116780>
- National Technology Initiative (2018). 100+ products' of the national technology initiative. <https://nti2035.ru/docs/100projectsNTI.pdf>
- Phillips, F., Yu, C.-Y., Hameed, T., & El Akhdary, M. A. (2017). The knowledge society's origins and current trajectory. *International Journal of Innovation Studies*, 1(3), 175-191.
- Silva, J., Solano, D., Fernandez, C., Romero, L., & Villa, J. V. (2019). Privacy preserving, protection of personal data, and big data: A review of the Colombia case. *Procedia Computer Science*, 151, 1213-1218.