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Digitalization: public opinion landscapes (on the example of Russia)

Abstract. The authors determine and verify the systems of indicators of public reflection regarding the issues of digitalization in Russia, construct and empirically describe their landscapes. The representatives of the Russian and Belarusian scientific expert communities and ordinary citizens of the Russian Federation were the main nominal groups of respondents in the study undertaken in 2019. The research is of an exploratory nature and serves as a tool for testing techniques for studying the problems posed in the article in the context of the technological «hype» of digitalization.

The perception of a number of mass digitalization mythologemes by the experts are of particular interest. A list of mythologemes under estimation goes as follows: «enslaving humanity with artificial intelligence»; «saving humanity by means of artificial intelligence»; «total surveillance is the goal of modern data technology (DT)»; «DT is a way of enriching elites»; Industry 4.0 is just a form of global capitalism»; «DT creates nature and society of the «third-order»; «achieving technological singularity through digitalization»; «reaching the stage of the Posthuman»; «the imminent creation of human-machine symbiots, «cyborgs».

As a result of studying the problem of social reflection of digital declarations which are politically imperative for the national economy and sociocultural life of Russia, we can argue that in reality they do not come to the forefront of partnership dialogue in the institutions of the society. Despite the relevance of consolidating social efforts to achieve a technological breakthrough and the marketability of the topic of digitalization, it is not provided with either the political request of elite groups or the research interest of social sciences or understanding of the essence of the issue by the main groups of the population.

Keywords: Digitalization; Industry 4.0; Digital Economy; Data Technology (DT); Public Opinion; Social Landscape; Technological Progress; Social Changes; Political Elite; Digital State

JEL Classification: O33; P17; Z13

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Цифровізація: ландшафти громадської думки (на прикладі Росії)

Анотація. У статті визначено й верифіковано системи показників суспільної рефлексії проблем цифровізації в Росії, побудовано й емпірично описано їх ландшафти. Основними номінальними групами респондентів дослідження виступили представники російського та білоруського експертного наукового співтовариства й пересічні громадяни РФ. Дослідження має розвідувальний характер і служить інструментом апробації методик вивчення поставленої в статті проблеми в умовах технологічного «хайпа» цифровізації.

У результаті вивчення проблеми суспільної рефлексії декларативної цифровізації, що має політично-імперативний характер для економічного й соціокультурного життя Росії, можна говорити про те, що в реальності вона не висувається на перший план партнерського діалогу в інститутах суспільства. При всій актуальності консолідації громадських зусиль для досягнення технологічного прориву й кон'юнктурності теми цифровізації, вона не забезпечена ні політичним запитом елітарних груп, ні дослідним інтересом серед діячів суспільних наук, ні розумінням суті питання основними групами населення.

Ключові слова: цифровізація; індустрія 4.0; цифрова економіка; суспільна думка; соціотехнічний ландшафт; технологічний прогрес; соціальні зміни; політична еліта; цифрова держава.

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Цифровизация: ландшафты общественного мнения (на примере России)

Аннотация. В статье определены и верифицированы системы показателей общественной рефлексии проблем цифровизации в России, построены и эмпирически описаны их ландшафты. Основными номинальными группами респондентов исследования выступили представители российского и белорусского экспертного научного сообщества и рядовые граждане РФ. Исследование имеет разведывательный характер и служит инструментом апробации методик изучения поставленной в статье проблемы в условиях технологического «хайпа» цифровизации.

В результате изучения проблемы общественной рефлексии декларативов цифровизации, имеющих политически-императивный характер для экономической и социокультурной жизни России, можно говорить о том, что в реальности они не выдвигаются на первый план партнерского диалога в институтах общества. При всей актуальности консолидации общественных усилий по достижению технологического прорыва и конъюнктурности темы цифровизации она не обеспечена ни политическим запросом элитарных групп, ни исследовательским интересом со стороны представителей общественных наук, ни пониманием сути вопроса основными группами населения.

Ключевые слова: цифровизация; индустрия 4.0; цифровая экономика; общественное мнение; социотехнический ландшафт; технологический прогресс; социальные изменения; политическая элита; цифровое государство.

1. Introduction

Modern socio-economic processes in Russia are largely controversial and still defined as «catch-up modernization». However, the goal of integrating the country into global trends of scientific and technological progress, providing the development of different areas of the global economy, remains topical. Today, the so-called digital technologies, «digitalization» in the context of the Fourth Industrial Revolution paradigm, have the status of transnational «hype».

In the current political discourse of Russia, it is «digitalization» that has forced out the most popular socio-economic ideologemes of the recent past, including «nanotechnologies», «innovations», «convergent technologies», etc. In this situation, such slogans of the transition to new technological paradigms are often not fully understood not only by ordinary citizens of the country but also by the politicians and the scientific and expert community. In this regard, a comprehensive socio-humanitarian reflection of digitalization is of importance.

We consider that studying expert assessments requires the selection of flexible tools that allow establishing content-related peculiarities of evaluating digitalization and its prospects rather than just its quantitative indicators. In the article, we present a comparative analysis of the results of qualitative and quantitative studies of the opinion of various nominal groups.

2. Brief Literature Review

It should be emphasized that on the whole, there are no either large-scale sociological studies of public perception of digitalization ideologemes and real processes by the Russian citizens in the

Russian sociology or foreign works in this area. Nevertheless, there are a number of authors who study the issues related to the technological development of society whose works are devoted to the socio-humanitarian aspects of convergent technologies and technoscience (Aseeva, 2015, 2016, 2017), sociology and cyberspace interfaces (Romanovsky, 2000), the crisis of technological civilization and innovative development (Kamensky & Boev, 2015), the socio-humanitarian expertise of biomedical innovations (Aseeva & Budanov, 2015), the ethical aspects of NBIC-Convergence (Grebenshchikova, 2016), the new paradigm of sociology in a complex society (Kravchenko, 2012a, 2012b), sociocultural transformations of global modernization (Matveeva & Sarapul'tseva, 2019), the answer to the question regarding the mechanism of humanitarian visuality (Kurasawa, 2015), digital culture issues (Rius-Ulldemolins, Pecourt, & Arostegui, 2019), Big data in sociological analysis of the text (Cointet & Parasié, 2018), digital health issues and medical innovation (Lennon et al., 2017), sociology of privacy (Anthony, Campos-Castillo, & Horne, 2017), case studies of digital media (Fero, 2015), cultural cyber-utopianism (Rius-Ulldemolins, 2015), etc.

3. The purpose of the paper is the presentation of landscapes of collective consciousness of the Russians in relation to the emerging digital techno-reality based on large-scale empirical sociological research. The solution of such a problem has not only purely scientific but also political and economic value since it will make it possible to understand the real sociocultural landscape of the Russia's «digitalization» in a global context. The study is of an exploratory nature and serves as a tool for testing some techniques for studying the problem posed in the article.

4. Empirical base of the research

To achieve the goal set in the article, a pilot empirical study was conducted applying the semi-structured expert interview method ($N = 60$) as well as a mass online survey ($N = 900$) and an expert questionnaire-based survey ($N = 150$). The sample included experts from various fields of science and practice related to the application, development and examination of the advanced digital technology as well as social categories that do not have expert status in the specified sphere. In addition, in quantitative research, the expert group included both the Russian (Institute of Philosophy of the Russian Academy of Sciences of the Russian Federation) and the Belarusian scientists (representing the Institute of Philosophy of the National Academy of Sciences of Belarus) in equal shares ($N = 75$ for each nominal group), which allowed a comparative analysis of existing opinions to be carried out. The study was conducted in May-November 2019.

5. Results

The very concept of «digital technology», despite the frequency of its use, needs to be clarified since otherwise it risks becoming a «commonplace» of a newfangled discourse without any substantive content. Such concepts are often only conditional but at the same time they successfully function as myths and ideologemes.

Even the very first question concerning understanding of the term «technology» by the experts themselves showed the whole range of opinions. One of the interpretations includes all kinds of information and communication technology which provide automation control of technological processes as the «digital» ones. This approach defines the «umbrella» character of the concept, which leads to terminological confusion. According to some experts, *this was made intentionally to make it easier to «harvest money» in this domain*. This practice is determined by the market and raises the question of introducing a more relevant term for «digital» reality: *Digital technology reminds me of a rattle We are trying to reach for it without understanding what it is. I am a lawyer and I define digital technology in the narrow sense as information and communication technology which is also used in the legal sphere*.

Quantitatively, the opinion of the experts confirms the thesis that it is necessary to specify the concept: 51.7% of the Russian experts were not able to give its clear definition. Those familiar with the issue reduced it to the generalized form of «electronic (computer) technology» (85.7%), «technology based on information encoding» (71.4%) and «any technologies for interaction with a computer» (42.9%). Among the Belarusian experts, there were none who misunderstood the «trendy» term, but in almost 90% of cases, digital technology was defined very broadly as «technology related to computerization».

Generalized statistics of the mass survey of the population identifies certain points of the ideological «hype» associated with digitalization. The largest percentage of the population knows such

concepts as artificial intelligence (92.8%) and cryptocurrency (79.3%). «Big data» is represented as awareness and its absence almost equally - 48.1% and 51.9%, respectively. As for such concept as «Industry 4.0», 59.2% are unfamiliar and 39.8% are familiar with it; similarly, «Blockchain» - 61.2% are unfamiliar and 37.3% are familiar. In answering an open question, informed respondents characterized them in a generalized form as anthropomorphic entities, artificial intelligence, «*intelligence that solves problems as a person, but better than him,*» or as robotization.

The experts themselves pay special attention to changing the technological architecture of information processing technique embedded in the principle of digitalization: «*this is a technique of processing information using binary coding. Based on this, it is of importance to find out how to introduce digital technology into the practice of managing social systems since we must set the task of transition from information management to society management*».

As some experts point out, replacing the «analog» technology with a «digital» one is connected with the fact that the digital technique of processing information provides security (or the illusion of such) and can be widespread due to its universality. On a more general level, it is capable of self-reproduction - *a machine can program itself, which will lead to the displacement of unskilled programmers from the labour market.*

Most experts believe that «digital» technology does not completely eliminate previous practices but will complement them as a more convenient interface. Digital and analog devices still complement each other, which sets the task of finding *the boundary between analog and digital things. This boundary can be found through a system of sensors that allow digitizing the environment and human activities.*

The impact of modern digital technology on human life is undeniable. However, how can this impact be evaluated?

Regardless of gender and age, the respondents from the main population groups most equally recognize both social benefits and the risks of digital technology (DT) developing - 69.9%. Only benefits are mentioned by 19.3% of them, and only negative effects are noted by 3.4%. At the same time, a total of 79.2% of the respondents admit that DT changes their life drastically (35.0%) and to a large extent (44.2%). Some respondents (8.1%) believe that the changes are insignificant, and some (5.6%) say that there are no changes at all. In this case, the latter categories are predominantly the representatives of the older age group (50 years and more - 89.1%). Young people are acutely aware of the changes (98.7%), most among them are 30-40 years old (63.2%).

Many experts, the representatives of Belarus, noted that it is generally impossible to forecast the real consequences of digitalization - 21.4%, versus 15.4% of the Russian experts. At the same time, the Russians are more optimistic about the prospects of digitalization when assessing its consequences as equally «positive and negative» (76.9% as compared to 50.0% of the Belarusians). The Belarusian experts fear the negative consequences of DT more than twice as many - 14.2% versus 7.0% of the Russian ones. The latter consider the impact of digital technology through the categories of institutional order and the development of principles for their social regulation.

- *Digitalization can influence both positively and negatively all areas of life ... Now it affects negatively. The principle by which the economic model follows the life activity model, and digitalization model is the third in this chain, has been defied. In practice, everything is vice versa. Money is allocated for national projects in the digital economy but they cannot be utilized since nobody knows what to spend it on ...*
- *Digital technology is already affecting our lives. The fact that the authorities pay attention to this is correct, but these processes are controlled to a very small extent by the state. It is important to choose reasonable policies - economic, social, etc. - in this area.*

The problem of DT management must meet not only the criteria of technological and economic feasibility. This thesis is constantly emphasized by the experts: the importance of digital technologies in social development, increasing the level of public participation could be greater if digitalization processes were based on the development and implementation of humanitarian technologies based on values. Otherwise, crises arise:

- *When practices to which a person gives a temporal resource emerge, this happens at the expense of other cultural practices ... A new cognitive map, in which we observe degradation, emerges.*
- *We bring ourselves down to the weak artificial intelligence level while cooperation in which a person retains competence is needed.*

- *It is too early to talk about values when the environment is not yet structured; but the existing environment is organized in such a way that makes us adapt to it.*

Experts agree that DT is a big challenge for society and requires the development of various scenarios. An important condition for understanding and forecasting the DT development is finding significant objects of digital impact such as social sphere and institutions.

The population gives the highest priority to 3D printing (57.4%) and virtual / augmented reality technologies (53.3%). According to the population's opinion, artificial intelligence, robotics (48.2%), new computing technologies (46.2%) and cryptocurrency (43.3%) have the second ranking position as the most important DT for development. The distribution is as follows: ubiquitously linked sensors (21.8%); Big data (18.3%), blockchain and distributed accounting (15.7%). However, this opinion of the population does not reflect the actual state in the technological sphere of Russia.

In turn, most experts indicate that the economy is affected by DT to a greater extent; this is confirmed by numerous technologies: blockchain, cryptocurrency, and their complexes (Industry 4.0, etc.). However, when quantifying the results of the expert survey, they forecast the greatest impact on the sphere of social communications and interactions: 76.9% of the Russian experts and 51.7% of the Belarusian ones share this point of view. The sphere of economy is actualized by the the Russian expert community, but they ranked it the second (46.2%).

Further ranking distribution of the Belarusian experts is different. Spiritual and material culture was ranked the second (35.7%); economics and politics were ranked the last (14.3% each). As for the Russian experts, they assess the position «material and spiritual culture» similarly only in the percentage distribution of answers - 30.8%, ranking it the third in the ranking distribution. The degree of influence of DT on the political sphere is assessed by the Russian experts similarly to the Belarusians - 7.7%. Among the representatives of both expert groups, mass and personal psychology have a close assessment (the Russian experts - 23.1%; the Belarusian ones - 28.6%), but they are ranked differently (the Russian experts - 4th; the Belarusian ones - 3rd). Thus, the most significant difference is observed when assessing the economy as an object of DT impact.

The results of the survey of the population concerning the reasons for using DT in people's lives is representative as compared to expert opinions. Personal initiative prevails (42.1%). Nevertheless, the massive digitalization of social practices and communications is gaining momentum (21.3%), the reasons associated with professional activity are in the third place (16.8%), and only 3.0% of the respondents indicate a kind of pressing circumstances.

The experts note a significant change in legal relations in the context of DT: *New types of relations, which previously either could not be regulated or did not require regulation at all, emerge. Relationships between new legal entities that are not yet implemented without human involvement are emerging. Finally, it is worth highlighting the problem of endowing non-human entities (robots, for example) with legal personality. Why do we need to blur the line between the subject (a person) and property? Where does it lead?*

The endowment of non-human actors with the legal personality actualizes an important ontological problem: the issue of demarcation of the human and non-human, and more broadly - organism and mechanism, physical and non-physical. The experts raise the issue of technological and legal support for DT sphere regulation, which can lead to conflicts in practice (for example, implementation of a judgement to block the Telegram messenger in the Russian Federation was impossible since its users applied certain filters that allowed them being undetected).

All the experts paid attention to the DT impact on the institution of education. This impact is two-fold. On the one hand, DT can serve as a means of developing new competencies, simplify the performance of routine operations, and ensure the development of creativity. On the other hand, the uncontrolled use of gadgets and electronic technologies by children and adolescents leads to a decrease in their cognitive abilities, loss of communication skills, and degradation of their emotional intelligence. In particular, 95.3% of young people under the age of 30 receive information about the DT itself on the Internet. However, this can hardly be considered confirmation of such concerns. In this case, «digital things» simply inform about «digital things». Moreover, 89.6% of the population over 50 have some information about DT from random sources (55.3%), the media (17.2%), friends, acquaintances, and colleagues (16.3%), and a little more than 15% of the respondents are not interested in this topic at all. At the same time, 86.5% of those surveyed whose age is under 50 are interested in the topic of digitalization.

In particular, the opinion of the population about risks and threats of modern DT to society as a whole is indicative. Most of the respondents did not express concern: there are no threats (26.8%)

or almost no (25.3%). 24.7% of the respondents doubt DT safety, and only 7.2% of all the population groups are sure of DT danger. Among those who note the possible threats and risks of digitalization, most of the respondents indicate *addiction to its constituent technologies, alienation and loneliness, inertness of thinking and lack of criticality, «cyborgization», the growth of new types of crime (for example, hacking), unemployment, and in some cases man-made environmental disasters.*

The quantitative distribution of expert ranking illustrates certain forecasts concerning the appearance or aggravation of sociocultural and psychological problems more clearly. The ranking scales of both expert groups are similar (Table 1).

Table 1:
Key threats of digitalization (expert opinion)

The Russian experts			The Belarusian experts		
Rank	Indicator	%	Rank	Indicator	%
1	Virtualization of public and private life, social isolation	53.8	1	Virtualization of public and private life, social isolation	42.9
2	Intellectual degradation	38.5	2	Intellectual degradation	28.6
3	Moral decline, the destruction of morality	38.5	3	Moral decline, the destruction of morality	21.4
4	Deterioration of health, decline in quality of life	23.1	4	Deterioration of health, decline in quality of life	21.4
5	Social inequality	23.1	5	All of the above	21.4
6	Growth of unemployment	23.1	6	Growth of unemployment	14.3
7	All of the above	15.4	7	Social inequality	14.3
8	None of the above	7.7	8	None of the above	14.3

Source: Authors' own research

The population also sees the virtualization of life as a major problem. A total of 59.4% of the respondents say that digitalization does not create any psychological discomfort for them, but 28.4% note it, and 12.2% could not determine their attitude. The greatest discomfort is experienced by the citizens between the ages of 30 and 50 (64.2% of the nominal group) while older respondents make up the main category of those who found it difficult to answer the question (85.3% of the nominal group). Young people under 30 express mass optimism (72.6% of the nominal group).

Those who feel emotional and psychological discomfort ranked the problems they experience (Table 2).

Table 2:
The main indicators of psychological discomfort as a result of the DT development (mass survey of the population)

Rank	Indicator	%
1	Replacing the real life with the virtual one	63.9
2	Growth of unemployment, replacing people with computers	52.8
3	Computer psychological addiction	50.0
4	The probability of losing sensitive data	47.2
5	Destruction or change of the human nature	34,7
6	Likelihood of environmental disasters	26.4
7	Destruction of cultural traditions and values	19.4
8	The probability of technological accidents and disasters	16.7

Source: Authors' own research

As noted by the experts, the general increase in the level of comfort is also obvious: *Even now, many areas of life have become more convenient with the advent of digital technologies. For example, we do not need to go to the store for any product since we can order it online without leaving our home, not to mention such complex things as workflow ...*

The expert forecast of the DT role in solving social problems is presented in Table 3.

As seen from Table 3, the ranks of the expert groups are different. While the Belarusians see the advances of DT development in the development of intercultural communication and tolerance, most of the Russian experts express scepticism, arguing that DT will not contribute to the solution of modern social problems. Unanimity is observed only about the possibilities of personal development and self-realization (rank 2).

Since the implementation of forecasts for DT development is difficult, a number of experts suggest their testing in the Eurasian space, which is topical for the political and cultural integration of Russia. However, the experts doubt the need for state and/or other promotion of DT. Many network phenomena and social technologies (e. g., crowdsourcing) emerge due to the specific architecture

Table 3:
Expert forecast of the main advances in solving social problems in the process of digitalization

The Russian experts			The Belarusian experts		
Rank	Indicator	%	Rank	Indicator	%
1	DT cannot help solve modern social problems	53.8	1	Development of intercultural communication, tolerance	50.0
2	Personal development, expanded access to self-realization resources	38.5	2	Personal development, expanded access to self-realization resources	42.9
3	Development of intercultural communication, tolerance	30.8	3	Social equality in a virtual network environment	28.6
4	Social equality in a virtual network environment	23.1	4	Improvement of health and life expectancy	14.3
5	Improvement of health and life expectancy	0	5	DT cannot help solve modern social problems	14.3
6	Decrease in unemployment, improvements in living standards	0	6	Decrease in unemployment, improvements in living standards	7.1

Source: Authors' own research

of communicative Internet networks, the features of which are flexibility, equality, decentralization, relatively weak control and the lack of a clear hierarchy.

The digitalization process is a global one, but at the same time, in practice, the development and implementation of digital technology faces the specific realities (political, legal, cultural, economic, etc.) of a country. Table 4 shows a comparative quantitative assessment of the main digitalization obstacles by the expert groups, indicating the significant national differences between them.

Table 4:
Main obstacles for the digitalization (expert assessment)

The Russian experts			The Belarusian experts		
Rank	Indicator	%	Rank	Indicator	%
1	Sociocultural	53.8	1	Sociocultural	42.9
2	Technological	38.5	2	Administrative	35.7
3	Legal	30.8	3	Difficult to respond	21.4
4	Administrative	23.1	4	Legal	14.3
5	Psychological	23.1	5	Psychological	14.3
6	All of the above	15.4	6	Technological	14.3
7	Difficult to respond	0	7	All of the above	14.3

Source: Authors' own research

In this regard, the experts were also asked to answer the question concerning the specific character of digitalization in Russia, any special ways of its development or the necessity to follow global trends.

Half of the Russian experts (50.0%) believe that there is a certain specific character of the DT development in Russia, but in general, it follows the global trend. 25.0% believe that there are no specific Russian features of DT development, and the next 25.0% consider, on the contrary, that Russia should consciously choose its own path in the digitalization process. None of the Russian experts believes in the uniqueness of «the Russians matrix» and its objective impact on the Russian digitalization, but 7.7% of the Belarusian colleagues share this opinion. At the same time, in the majority, the Belarusian scientists agree with the Russian ones in assessing that Russia follows the global digitalization trend, having a certain national specific character (42.6%). 7.7% of the Belarusian experts are sure about the objective uniqueness of Russia and the need to choose its own path in building «digital environment».

In addition, in the qualitative study, a number of important comments and considerations were made: *The state has not understood yet what to do with relations emerging in the field of digital technologies and how to regulate them; the support for digital practices is often imitative, now we are at the peak of hype, and soon we will face a decline; most of us are not yet ready for the digital breakthrough.*

It is obvious that the modern state, which claims to be at the forefront in the DT development, cannot head for isolation from the outside world: *Technology is global, it is not a secret when it develops. The efforts that are now aimed at autonomization cause many objections. Of course, the autonomy of a city, country or even an individual institution may be reasonable in some cases, but the general political idea of isolation from the rest of the world is a wrong strategy.*

The experts draw attention to the fact that digital technology can be followed by a number of important economic and political consequences: *in its essence, digital technology is a project of*

socialism with a «digital face», a rejection of a consumer society; digital technology results in the emergence of a «digital concentration camp», the so-called Chinese version; the role of repressive apparatus may become significant; escaping to the digital economy is a serious challenge since we are talking about the economy without intermediaries, without the state, without banks ... As long as we have people for the sake of the economy, there will be no success.

As it can be seen, the experts generally consider the modern stage of digital development as a specific point of the phase transition; the transition through which may have the drastic consequences which are difficult to predict. Hence, the issue of alternatives to the digitalization is topical (Table 5); they reflect the socio-humanistic worldview of the Russian experts and the total uncertainty of the Belarusian ones.

Table 5:
Alternatives to the digitalization (expert opinion)

The Russian experts			The Belarusian experts		
Rank	Indicator	%	Rank	Indicator	%
1	Social technologies	30.8	1	Difficult to respond	42.9
2	Convergent technologies	23.1	2	Could not respond	35.7
3	Difficult to respond	23.1	3	Cognitive technologies	21.4
4	Ecological approach, de-technologization, return to nature	7.7	4	Social technologies	15.4
5	Biotechnology	7.7	5	Convergent technologies	7.7

Source: Authors' own research

In this context, the distribution of the opinions of the Russian population on the prospects for replacing a person with DT is interesting. Thus, most of the respondents refer space exploration (92.3%), industry, agriculture (89.9%), financial transactions on exchanges and similar ones (86.0%), emergency response (84.2%), document management (77.4%), public and private transportation (64.4%) to the areas where it is possible and/or desirable to make a replacement. The citizens participated in the questionnaire categorically deny this possibility in the areas of justice (91.2%), education (89.8%), and medicine (78.6%); they are somewhat more restrained in law enforcement (61.2%) and military technology (55.6%). Contrary to the opinions concerning leisure virtualization, this sphere occupies a middle position in the ranking of the population: replacement is possible - 52.8%, impossible - 47.2%. In this case, regular use of certain information resources is noted precisely in the leisure sphere (68.8%) and in the payment of fines (78.6%) as well as it is most often in the field of standard interpersonal communication (88.2%), among the entire possible spectrum of the mass use. The general level of DT knowledge by the respondents themselves can be rated on the 10-point scale as «lightly above average», i.e. about 6.5 points, among which the older generation (4 points) is expected to be significantly behind youth (8.5 points).

Against the background of the expressed opinions, the analysis of the results of the expert survey on a number of market and mass digitalization mythologemes is a good illustrative set. In particular, the Belarusian experts are more sceptical in relation to the real possibility of enslaving humanity with artificial intelligence (64.3%) than the Russian ones (41.7%). The first ones see this possibility in 21.4%, while the second ones comprise 50.0% of the total number of the nominal group. At the same time, there are much more experts who feel difficulty answering the question (14.3%) in the Belarusian community than in the Russian one (8.3%). Thus, the Russian experts are divided in two camps sharing opposite opinions while the representatives of Belarus mainly believe in such an unfavourable outcome.

Speaking about the mythologeme of «saving humanity by means of artificial intelligence», most of the experts from both national groups have already recognized its utopian nature - a little more than 50% in both groups, respectively. At the same time, both the Belarusian and the Russian experts believe that such a myth does not exist at all - 21.4% and 25%, respectively, and only 14.3% and 16.7% of them, respectively, believe in its reality. At the same time, 75.0% of the Russian scientists consider the mythologeme of total surveillance as the goal of modern DT to be a reality, while among the Belarusians this viewpoint is shared by 57.1%.

The opinion that DT is a way of enriching elites is also more common among the Russians (50.0%). The Belarusians are represented equally: «for» and «against» - 36.7%, respectively. They also illustrate great difficulties with the formulation of any position in general (14.3%) in contrary to the lack of such difficulties in the Russian group. At the same time, one third of the scientists from Russia (33.3%) generally believe that such a myth does not exist in the public consciousness, and

the Belarusians are represented here more than half as much - 14.3%. Against the background of such data, it is worth emphasizing the distribution of responses of the participants in a mass survey. In their eyes, big business is a significant beneficiary from the DT introduction (23.4%); yet this opinion inferior to the civilizational objective benefit (36.0%). The next largest groups - beneficiaries are «ordinary people, users, consumers» (17.3%) and political elites (12.7%).

Few experts also doubt that Industry 4.0 is just a form of global capitalism. This opinion is shared by 71.4% of the Belarusians and by 58.3% of the Russians. However, the Russian scientists believe in the fact that DT creates nature and society of the «third-order» to a slightly greater extent (41.7%) in contrast to the Belarusian ones (35.7%). At the same time, 35.7% of the Belarusian experts also deny this myth, though among the Russian ones this share is only 16.7%. In this case, the scientists from the Russian Federation are more inclined to the viewpoint that such a myth does not exist at all (41.7%), while the number of foreign respondents is half as much (21.4%). The same number of the Russians (41.7%) believe that there is no myth about achieving technological singularity through digitalization, or it is a utopia (50.0%). In this case, almost a third of the Belarusian respondents (28.3%) could not express their viewpoint, 36.7% believe in the reality of the myth, and 28.6% believe in its utopian nature.

The vast majority of the Russian experts do not believe in the possibility of reaching the stage of the Übermensch or the Posthuman as one of the most disseminated mythologemes of the modern digital revolution. The Belarusians mainly deny such an outcome - 57.1%. There are also twice as many of those admitting this possibility due to DT in Russia than in Belarus: 25.0% in comparison to 14.3%. On the other hand, about half of the entire expert community believes that the myth of the imminent creation of human-machine symbiots, «cyborgs», is quite real. At the same time, only 8.3% of the Russian experts believe that Russia can implement this due to the rapid development of DT, while the Belarusians are almost three times more optimistic about their neighbours - 21.4%.

6. Conclusion

Tentatively, based on expert assessment and a pilot description of the situation in public opinion, it can be concluded that if today's myths of cyborgization begin to come true, Russia will not be the social and technological platform where this epochal «leapfrogging» of singularity will take place.

In any case, regardless of the views concerning the fundamental DT uniqueness, all the experts and the population of the Russian Federation as a whole agree that DT development actualizes a number of tasks that are associated with overcoming their dehumanizing and alienating effect. The main means of mitigating the risks of human and digital interaction (machines, robots, gadgets) and the humanization of this process is monitoring of individual and institutional digitalization practices in different areas of life. Consolidation of human and technological resources will lead to the construction of self-developing reflective active environments.

The problem of digital immortality and other still fantastic scenarios will be solved in such subject-oriented spaces. New landscapes of digital reality will have to take into account the balance of human and non-human subjectivity so that a person would not become an appendage to technology and not only maintain, but also develop his creative and intellectual potentials in addition to competition in the global digital economy. A large-scale educational work, the creation of effective mechanisms of institutional communication of techno-science, authorities and the population as well as the development of social technologies of socio-humanitarian examination of scientific and technological progress will contribute to the solution of such problems.

References

1. Anthony, D., Campos-Castillo, C., & Horne, C. (2017). Toward a sociology of privacy. *Annual Review of Sociology*, 43, 249-269. doi: <https://doi.org/10.1146/annurev-soc-060116-053643>
2. Aseeva, I. A. (2016). Anthropological and social measurements of modern technoscience. In *3rd International multidisciplinary scientific conferences on social sciences and arts (SGEM), Book 3, vol. 2* (pp. 613-620). Retrieved from <https://www.sgemsocial.org/ssgemlib/spip.php?article3116&lang=en>
3. Aseeva, I. A. (2017). Social technologies: problems and functioning contradictions in new technological way. *Social and Humanitarian Knowledge*, 9, 7-13 (in Russ.).
4. Aseeva, I. A., & Budanov, V. G. (Eds.). (2015). *Socio-anthropological dimensions of converged technologies. Methodological aspects: multi-authored monograph*. Kursk: University book publisher (in Russ.).
5. Cakici, B., & Ruppert, E. (2019). Methods as forces of subjectivation: experiments in the remaking of official statistics. *Journal of Cultural Economy*, 13(2), 221-235. doi: <https://doi.org/10.1080/17530350.2019.1684340>

6. Cointet, J.-P., & Parasie, S. (2018). What Big data does to the sociological analysis of texts? A review of recent research. *Revue Francaise de Sociologie*, 59(3), 533-557. doi: <https://doi.org/10.3917/rfs.593.0533>
7. Colas-Bravo, P., Conde-Jimenez, J., & Reyes-de Cozar, S. (2017). Digital competences of non-university students. *Revista Latinoamericana de Tecnologia Educativa-relatec*, 16(1), 7-20. Retrieved from <https://relatec.unex.es/article/view/2909> doi: <https://doi.org/10.17398/1695-288X.16.1.7>
8. Crowe, N., & Hoskins, K. (2019). Researching transgression: Ana as a youth subculture in the age of digital ethnography. *Societies*, 9(3), 53. doi: <https://doi.org/10.3390/soc9030053>
9. Dunas, D. V., & Gureeva, A. N. (2019). Media studies in Russia: defining its academic status. *Theoretical and Practical Issues of Journalism*, 8(1), 20-35. doi: [https://doi.org/10.17150/2308-6203.2019.8\(1\).20-35](https://doi.org/10.17150/2308-6203.2019.8(1).20-35)
10. Fedorovich, O. V., & Vladimirovich, O. E. (2019). Regional mass media in the modern informational society (PMMIS 2019) journalistic text in a new technological environment: achievements and problems. *The European Proceedings of Social & Behavioural Sciences*, 66, 45-52. doi: <https://doi.org/10.15405/epsbs.2019.08.02.6>
11. Fero, M. (2015). Digital media in perspective of sociological research of young people. *Marketing Identity*, 1-2, 314-326. Retrieved from <https://www.ceeol.com/search/article-detail?id=477602>
12. Grebenshchikova, E. (2016). NBIC-convergence and technoethics: common ethical perspective. In *Biomedical Engineering: Concepts, Methodologies, Tools, and Applications* (pp. 323-331). Hershey, PA: IGI Global. doi: <https://doi.org/10.4018/978-1-5225-3158-6.ch013>
13. Kamensky, E. G., & Boev, E. I. (2015). An innovation civilization in the context of the anthroposphere crisis of the technogenic society. *Asian Social Science*, 11(4), 328-335. doi: <https://doi.org/10.5539/ass.v11n4p328>
14. Kravchenko, S. A. (2012a). Difficult society: the demand for turns in sociology. *Sociological Research*, 5, 19-28 (in Russ.).
15. Kravchenko, S. A. (2012b). *The formation of a complex society: justification the humanistic theory of complexity*. Moscow: MGIMO-University (in Russ.).
16. Kurasawa, F. (2015). How does humanitarian visuality work? A conceptual toolkit for a sociology of iconic suffering. *Sociologica*, 9(1). doi: <https://doi.org/10.2383/80396>
17. Lennon, M. R., Bouamrane, M.-M., Devlin, A. M., O'Connor, S., O'Donnell, C., Chetty, U., Agbakoba, R., Bikker, A., Grieve, E., Finch, T., Watson, N., Wyke, S., & Mair, S. F. (2017). Readiness for delivering digital health at scale: lessons from a longitudinal qualitative evaluation of a national digital health innovation program in the United Kingdom. *Journal of Medical Internet Research*, 19(2). doi: <https://doi.org/10.2196/jmir.6900>
18. Lutz, Ch. (2016). A social milieu approach to the online participation divides in Germany. *Social Media + Society*, 2(1), doi: <https://doi.org/10.1177/2056305115626749>
19. Lyall, B., & Robards, B. (2018). Tool, toy and tutor: Subjective experiences of digital self-tracking. *Journal of Sociology*, 54(1), 108-124. doi: <https://doi.org/10.1177/1440783317722854>
20. Mainzer, K. (2011). Interdisciplinarity and innovation dynamics. On convergence of research, technology, economy, and society. *Poiesis & Praxis*, 7(4), 275-289. doi: <https://doi.org/10.1007/s10202-011-0088-8>
21. Matveeva, A. I., & Sarapul'tseva, A. V. (2019). Problem areas in corporate culture formation in higher education system. Social and cultural transformations in the context of modern globalism (SCTCGM 2018). *The European Proceedings of Social & Behavioural Sciences*, 58, 1351-1358. doi: <https://doi.org/10.15405/epsbs.2019.03.02.156>
22. Rius-Ulldemolins, J. (2015). Against cyber-utopianism. Utopian discourse versus sociological analysis of the transition to the digital paradigm of the cultural sphere. *Política y Sociedad*, 52(1), 153-178. doi: https://doi.org/10.5209/rev_POSO.2015.v1.n52.45426 (in Spanish)
23. Rius-Ulldemolins, J., Pecourt, J., & Arostegui, J. A. R. (2019). Contribution to sociological analysis of creativity and the digitization of cultural field: creation, intermediation and crises. *Arbor-Ciencia Pensamiento y Cultura*, 195(791). doi: <https://doi.org/10.3989/arbor.2019.791n1004>
24. Romanovsky, N. V. (2000). Interfaces of sociology and cyberspace. *Sociological Research*, 1, 16-23 (in Russ.).

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