Experience of research of the topic of digital inequality in the Arctic based on ideas of German sociologists and psychologists

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Abstract. The article is devoted to the problem of digital inequality in the Arctic in the entire complexity of this problem. It cannot be reduced only to providing all Arctic communities with equal access to digital devices and technologies. Even in this area, there is a need to combine different ways to solve this problem – the development of a fiber optic network, as in Murmansk, and satellite Internet, as the Republic of Sakha (Yakutia). However, this problem has a serious humanitarian component, consisting in the need to develop a culture of using digital technologies. This means an awareness of the challenges and dangers of the one-sided development of a personality in case of neglect of other forms of activity in the world, except for staying in virtual reality, as well as the danger of dominance in society such as individuals who are not able to distinguish a subject from an object, not capable of self-control and responsible actions. The culture of using digital technologies presupposes the establishment of a reasonable framework for their application and public control of them, which will put them at the service of the development of humanity in interpersonal relationships and the people themselves. As a result, digital technologies will be able to synchronize unrelated processes in the Arctic based on the information that is presented in digital form. It is on this basis that relations of cooperation between various actors in the development of the Arctic can be established, which will allow to achieve the effect of the synergy of their actions in the process of the spread of digital technologies in the Arctic.

1. On the statement of the problem: on the mismatch of the action plans of various actors in the development of the Arctic in overcoming the digital divide in the Arctic

At the International Arctic Forum “The Arctic – the Territory of Dialogue” in St. Petersburg in April 2019, it was noted that when discussing the problem of digital inequality in the Arctic, various stakeholders – government politicians, state corporations responsible for ensuring the work of the digital sector or the dissemination of digital technologies (“Rostelecom”, “Rosatom”, “Rostec”) and private business, considering the possibility of conducting their business in the region from a position of profit, actively promote their own ideas about the nature of digitalization and therefore insist on the choice of orientation of the state policy in the region, based on these interests. Since there may be a conflict of various interests (for example, the allocation of subsidies for satellite communications can impede the implementation of fiber-optic projects by “Rostelecom”, and the allocation of quotas and the creation of special conditions for doing business in the Arctic may come into competition with the
demand for subsidies for the population), the process of Digitalization may be inhibited. With limited resources, it is impossible to solve all problems at once, and therefore the participants in the discussion suggested choosing the strategic direction of development in the field of digitalization and implementing it, then assess the achievement of the goal and move on to the next one. Based on the positive experience of the city of Murmansk, such a goal may be covering with fiber optic a certain percentage of the Arctic Zone by a certain year, after which it will be possible to move on to the next region. This paragraph is written based on: [1].

At the same time, satellite technologies are successfully developing in Republic of Sakha (Yakutia) that provide the population of remote territories with access to satellite Internet. This increased the share of households using the Internet to 78.8% in 2018. This allows us to talk about another method of digitalization of the Arctic being implemented in Yakutia, an alternative to the Murmansk method and associated with overcoming the challenges of large territories: [2].

2. The methodological Remark: Digitalization as an objective process
The discussion about setting priorities in the digitalization of the Arctic and the concentration of resources in priority areas seems convincing at first glance. However, they are based on the concept of digitalization as a technical process that begins when they first install the appropriate equipment, create communication channels, then give individual disparate consumers access to these channels, etc. However, if we consider the process of digitalization in a comprehensive way, as if from above, then we will understand that it does not begin because economic entities, society or the state decide to launch it, but because all modern social life is being transformed under the influence of digital technologies. Digitalization provides an increase in the orderliness of the social system as a whole, which implies the establishment of such interconnections between various subsystems of society and various communities, during which they begin to be understandable to each other and capable of joint efforts to achieve a common goal [3], [4].

It follows that the subjects of Arctic exploration, which were described above, already have a common basis, which consists in the fact that the principle of their organization is digitalization, and therefore they cannot act otherwise than extending the scope of digital technology to Arctic reality. Therefore, such a process is objective, and sooner or later, society in the Arctic will become digital. Why do different subjects represent different ways of digitalization?

3. On the essence of digitalization as a social process: the approach of Armin Nassehi
The answer to this question will become clear after we, together with the German sociologist Armin Nassehi, analyze what kind of social problems digitalization solves. The expression of information in digital form based on a universal binary code generates an interesting effect of doubling symbolic reality, i.e. a new symbolic system arises, which is built on to existing systems that express information in analog form (language, culture, etc.). These sign systems that preceded the digital system themselves performed the function of symbolic display of objective reality, that is, humanity in the digital world begins to live in the world of double reality squared. However, these processes of digitalization were prepared from all sides, primarily due to the development of statistical methods of information processing, as well as due to changes in subjectivity, which give rise to the practice of self-presentation and self-objectification, which allows us to predict the behavior of large masses of people. “Big data” began to be processed when even statistical methods were not enough to understand what patterns our society functions in and how manageable it is. The society satisfies these needs in a new way, reducing the entire complexity of the social world to a combination determined by a binary code. The reduction of complexity always leads to the acceleration of social processes and the emergence of new diverse forms of human activity, with new social institutions around them.

What is the objective basis for the very possibility of presenting information in the form of data expressed in binary code? There are two of these basics. The first is that in society there are always patterns of behavior and worldview that are formed in the process of common everyday life and which may even not be fully understood by the participants in the practice. In modernization, new patterns
are replacing traditional patterns, which allow us to predict the behavior and reactions of large masses of people to the transformations that are taking place. The second basis is that in the course of modernization, relations are established between industries and areas of human activity, which seem to have nothing in common with each other and even conflicting. For example, the opposition of “physicists” and “lyricists” is known, but now even those who criticize digitalization use digital means to spread their position, and those who expect unlimited development of productive forces from digitalization constantly encounter the notorious human factor, that is limits of the adaptability of society to digitalization, which leads to the need to coordinate the development of the psyche and natural intelligence, on the one hand, and artificial intelligence, on the other hand. The data presented in digital form give the observer the opportunity to clearly see these relationships, which, when presenting information in analog form, can remain entirely at the level of speculation.

As just noted, digital data alone does not say anything, only their observer is able to generalize disparate data and interpret the results. At the observer’s points, conclusions can be drawn regarding the prediction of the future, for example, by tracking a digital footprint from a person’s purchases, one can not only predict his future decisions that he has not yet made, but also push him to such decisions. Therefore, at this point of the observer there may be a danger of monopolization of the activity of interpreting digital data in order to increase the capital of a limited social layer, and therefore democratic institutions can be saved only if the general public is provided with free access to methods of processing digital information and its use [5], [6].

4. On the impact of digitalization on a person’s personality: positive and negative aspects

Modern German psychologists and sociologists of education assess whether digitalization makes a person smarter and more educated or not. In this regard, it was found that when reading text on digital media, our brain works differently than when reading text on paper: if in the latter case, we run our eyes sequentially from left to right and then from row from top to row from bottom, then when reading electronic books, our eyes make F-shaped movements, which gives a person the opportunity to concentrate only on the most important information and view a large amount of texts for a short time. However, this ability to read quickly should not contradict the ability to read slowly, but to complement it, as evidenced by another experience. One group of subjects was given the opportunity to read text from a paper book, and the second — exactly the same text, in the same format, the same color and size of letters, only printed on an electronic book, and then it was proposed to solve tests in order to compare the level of assimilation of information. It turned out to be the best in the case of a paper book (especially with regard to establishing the time sequence of events in an artistic text), which is associated by psychologists with the fact that a person has the ability to tactically feel the book and turn over the pages, returning to what has already been read or performing other manipulations, and in the case of an electronic book, vision is primarily involved. Thus, texts on the screen of digital devices can be mastered in a short time and in large volumes, however more superficially than texts printed in books (however, the time taken to read such texts is a payment for thoroughness). If we want to quickly become established in a new material or in a situation of changes in the world, then those competencies that are formed when working on digital technology are suitable for us, and if we want to acquire deep and substantiated knowledge, we must use books and develop the competencies of “slow reading”. H. Losch also shows that if the Internet is introduced too early in the child’s life, and if the child spends too much time in the digital world, he (she) is not able to perceive the world at once with all his senses, and not just his sight, which leads to the unilateral development of personality. In addition, although digital devices can contribute to increased concentration of the child, in general, their unreasonable use leads to a decrease in the ability to self-control, which will depend on both health and the success of a person in adulthood, as it provides too quick a reward for the achieved result, which excites areas of the brain that are responsible for enjoyment, and the ability to work hard must be developed in order to obtain long-term and reliable results in the future. It is no coincidence that in the Silicon Valley in Los Angeles, most of the parents involved in the field of digital technology send their children to Waldorf School [7].
In more detail, the dangers of influencing the personality of the younger generation of the
digitalization process are examined by the famous German psychoanalyst M. Winterhoff,
summarizing the results of his many years of practice. He notes the mass distribution of such a
phenomenon among modern youth as the inability to distinguish between subject and object in the
relationship of children with parents and other people. As a result, such young people are actually at
the stage of psychological development corresponding to 10-16 months! According to Winterhoff, a
normally developed child, as it was several decades ago, at the age of five, listens to what his mother
says, not out of obedience, but because she is a mother, she has something to say, and he (she) behaves
decently in a restaurant not because he (she) was so educated, but because he (she) knows that
there are people around, and does not want to disturb them, does not want to upset his mother, and
later in the elementary school does homework, even if he (she) is not interested, for the teacher. The
main reasons for children to objectify other people for their own use, according to the conclusion of a
psychoanalyst, consists in the fact that the use of gadgets for a child replaces communication with
adults, which he (she) needs for the normal development and assimilation of life guidelines Gadgets
provide a stream of information that, dispersing attention, does not contribute to the formation of types
of experience, does not provide the confidence so necessary for orientation in this world, and even
educational games pose a potential danger: the passion for such games interferes with the development
of self-control (for example, the ability to wait), since the promotion instantly follows the task, excites
the emotional centers and thus s and thus keeps the child at the screen. Dangers also include the loss of
parental authority due to improper influence on the part of grandparents and autonomous education
starting from kindergarten.

With all these incidents, children are treated like young adults: they must learn to make choices
when they haven’t been taught this, recognize the other as another when they don’t feel recognition in
relation to themselves (on the part of parents for whom gadgets and the Internet often more important
than a child, and whose authority is also often already compromised); at the same time, parents who
have recently been living in the absence of prospects for themselves, see their happiness in the
happiness of the children and begin their career already from kindergarten, again, with minimal
damage to themselves, blaming specialists for the development of the child additional education. At
school, the requirements are increasing: the requirements for the comprehensive development of the
child plus early professionalization, which leads to a situation where the choice of methods and level
of training begins to be largely determined by the randomness or projection of the parents, consisting
of unfulfilled expectations.

Also, progressive digitalization plunges children into a space where increasing acceleration in time
acts: if adults, in order not only to succeed, but at least to keep existing, should be a little faster every
year, as a result of which they burn out (burnout as a phenomenon of our century), then they push
children forward themselves: they must have a happier future in another happier world! So adults are
trying to most accurately predict life in the future world and their child’s place in this future, forgetting
the appeal of the famous humanist teacher Theodor Litt in a dispute with German social-nationalists in
the early 30s of the XX century: “The future does not belong to us!”, i.e. forgetting that having a clear
image of the future for the next generation means committing violence against this generation, and
also that we can neither make the other want or set his own goals for the other.

With proper development, the child naturally wants to learn, but when parents and teachers make
super demands on him, denying him proper (attention, recognition, good nutrition (domestic culture)),
the position of a child-adult changes, and the child finds himself in a situation when it is necessary not
him, but adults from him. At the same time, the child has an exorbitant responsibility: he has no one to
rely on, no one to equal, the future becomes a conditional, threatening, expressible with the word “if”,
and the elementary need for recognition also rests on this “if”.

The main opposition to the current situation is the correct development and strengthening of the
psyche of children: if they are owners of a psyche comparable to at least ours, then in the future they
will figure out what’s what and without our participation [8], [9], [10].
5. Conclusion: On the role of culture in overcoming the digital divide in the Arctic

Thus, the use of digital technologies as a whole is necessary so that they contribute to the harmonious development of human abilities, and do not interfere due to the development of some abilities to the detriment of others. Digital technologies need to be introduced in the Arctic gradually, without destroying traditional institutions and not trying to accelerate the pace of public life, since this is fraught with a weakening of people’s ability to reach mutual understanding with each other, as well as the spread of a dangerous installation for the fragile nature of the Arctic to quickly use natural resources without thinking negative long-term environmental consequences. At the same time, the development of digital technologies will contribute to a better understanding of the Arctic processes both in nature and in social life, as well as understanding the influence of the Arctic on the inner world of indigenous peoples and immigrants, since digital technologies will be able to synchronize unrelated processes through the establishment of hidden links between them on the basis of the information that is presented in digital form. It is on this basis that relations of cooperation between various actors in the development of the Arctic can be established, which will allow to achieve the effect of the synergy of their actions in the process of the spread of digital technologies in the Arctic.

Therefore, the task of overcoming the digital divide in the Arctic cannot be solved on the basis of linear thinking, according to which the development of digital technologies is determined solely by ensuring free access of members of the Arctic communities to the Internet. It is necessary to create a culture of using digital technologies, which involves establishing a reasonable framework for their use and control of these technologies by the public, which will exclude the possibility of a “digital concentration camp” and put their digital technologies at the service of the development of humanity in interpersonal relationships and in the mankind in general. In this regard, digital inequality must also be understood in terms of unevenness in the level of development of the culture of using digital technologies. As a result, even the high level of security of the Arctic population’s access to digital technologies (in particular, to the Internet), which is observed, for example, in Murmansk, can create new social and psychological problems analyzed in lectures by Losch and Winterhoff, problems that can only be solved by development of a humanitarian culture of the use of digital technologies. And this requires the emergence of new humanitarian centers in the Arctic, which must adapt digital technology to the needs of society in order to ensure the sustainable development of mankind in the Arctic in the entire complexity of such development.

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