

# *Cultural and National Factors Affecting the Digitalization Process in Global Development*

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**Abstract**—The article deals with the problem of modern processes of society global change as a result of technologization and informatization and the consequences of these changes for culture; significant segments of cultural space and the principles of analysis of the transformation of cultural phenomena at three macro levels: nature, society, man are defined.

**Keywords**—*globalization; innovation; digitalization; criteria for evaluating innovation; culture spheres; scenario for future; national factors of development*

## I. INTRODUCTION

The modern world, going through a complex and multidimensional process called “globalization” in recent decades has entered a new phase – the creation of a digital society. The current dynamics of change has a very high pace, so it does not immediately become obvious that, while asserting certain goals and timelines for the information society formation, we essentially forget about the causal patterns of social life in those parts and segments that initially fall outside the scope of perception of reformers. Moreover, they remain “unnoticed” for the formalization and analysis of innovative trends growth in society, just those that are least subject to logical rationalization, namely culture and traditional national ways, **national and cultural prerequisites of digitalization in the context of global development** [1].

The current situation in the development of global projects that should bring humanity to a new quality of life through the introduction of digital technologies is the subject of close study of a number of sciences, among which the humanities are not the last. In fact, since we are talking about the inevitable qualitative leap in technology, which results in breakthrough methods of goods production consumed by humanity, the question is quite natural: what will the person do in this situation? What types of human activity will become relevant in the coming decades, and which ones will be a thing of the past? What will be in demand from professional activity, and what - hopelessly outdated? Answers to these questions are provided by analyzing the progress of society with the help of civilizational parameters - economic, social, political and legal elements, which determine the need for the dynamics of those changes in the structure of society that are universal. The problem of culture as a factor largely influencing progress, which directly depends on the conditions set by the cultural space and the results determined by the national characteristics of culture, is another significant

component of social development. Claiming the main trajectory of human development, we must take into account the heterogeneity of economic, social, political, confessional and a number of other components of human life, which will determine his interest in social progress and support of those conditions that contribute to its implementation. Society culture can be viewed from two sides: as a universal set of social life significant components, having general laws of development, or as specific elements of such a life, which will characterize society through folk, national, uniquely specific features. The coincidence of common cultural and national elements in ideology helps to accelerate progress, or slow down the negative factors of social development, or impede the implementation of a radical change in established national ways. The cultural characteristics of modern society are also necessary to be taken into consideration because the logic of human development from a historical perspective does not always regard the characteristics of individual nations, which substantially correct the general directions of progress. Since the middle of the XIX century, when the first results of the mass revolution in industrial production began to radically change the demographic structure of the industrialized countries, so that the demographic structure of society has radically changed in a few decades: the number of people employed in the industrial production has increased, while the number of agrarian workers decreased. The second historical phenomenon was the technological revolution of the mid-twentieth century, when industrial conveyor production began to be replaced by automated ones, which freed up a large number of workers and led to the rapid growth of services, which grew sensitively in the economy of developed countries. Now – the third, digital leap, or reform, or revolution. What this stage of change brings and what challenges humanity will face - we do not find a clear understanding of the result and duration of this process in any of the experts. Scientists who put this problem on the agenda of the scientific community, who started to analyze it among the first, could not even agree on a concept that would uniformly indicate this stage in the development of civilization. So, Dahrendorf and Drucker call this society as “post-capitalist” [2]; E. Giddens – “posttraditional” [3]; Zb. Brzezinsky – “technotronic” [4]; A. Touraine is positioning a “programmable” society [5]; D. Bell – “postindustrial” [6].

Researchers, depending on how they see the beginning and the foundations of the globalization process, can be divided into two groups. The first, and most of them, view the process

of global changes in society as the “upper level” of other processes associated with it. To refer to civilization dynamics reflecting different in scale and number of people involved in the changes, the terms “regionalization”, “localization” are used, less often - “nationalization”, since this concept characterizes both local and regional, and in some cases, global. In this case, the analytical material allows us to consider the dynamics of transformation, for instance, in one country or several, similar in quality to the changes taking place in regional states, in the conceptual structure “common – particular - individual”. The disadvantage of this approach is the lack of the analysis qualitative component of processes associated with globalization. The second group of researchers presents the phenomenon of globalization as more complex in architectonics. This process is presented in studies as determined by differential methodological approaches: economic, technocratic, functional, structural, cultural, sociocultural, modernist, etc.

We will consider the impact problem of the global, regional and local digitalization on various, significant in any period of time of the culture sphere segments that will allow us to follow the process of innovation and the degree of technological functioning ways impact on the society.

The society itself is conditionally divided into three types - traditional, industrial, post-industrial. Despite the fact that mankind has entered the XXI twentieth century as a stage of the ruling advanced technologies, we must recognize that countries are still very different from each other in terms of technical development. And this situation should be reflected in our analysis. So, schematically - the countries of the first, second, third world are, respectively, countries that have information technologies at the level of widespread use and accessibility (countries of the first world, developed countries); countries where access to these technologies is insufficient and limited by an economic structure characteristic for an industrial society (second world country); and countries that practically do not use information technologies, or they are accessible to a narrow layer of privileged people (third world countries). Separately, it is necessary to mention the countries of the fourth world, or rogue countries. Unfortunately, the last three decades have marked several unstable regions on the map, where the availability of modern technologies is beyond the reach of ordinary citizens. In most cases, it is necessary to speak about the fact of using such territories to test a modern electronic arsenal, which external players possess. Thus, for such countries, the use of the latest computer, digital and technological innovations is an externally determined factor, a way of testing digital technologies and weapons in practice. Speaking about rogue states, it is necessary to remember about this unattractive possibility of using modern technologies, when the target of attacks becomes civilians along with the noble goals of getting rid of terrorist and hostile threats.

## II. CRITERIA FOR EVALUATING INNOVATIVE PROCESSES IN CULTURE

Thus, the main criteria for assessing the possibilities of using digital technologies in the culture mirror are the following:

- The first is the economic sphere of society. This is the most obvious and most often analyzed part of material culture, where the opportunity to evaluate digital innovations is the most readable. In economics, such progressive technologies are always calculated not only from the standpoint of direct benefits and optimization of economic processes. Many economists have an objective prediction of the multiplier effect of their use.
- The second area where it is necessary to assess the impact of technological progress is social processes, the life of societies and social institutions. How does technological progress affect society, how do social groups change: groups, families, nations, peoples, estates differing in status and level of income - these are questions that must be answered to complete the picture of the impact of technological progress on the living fabric of public life.
- The third sphere is the state as a social institution and legal system supporting innovation processes. It is appropriate to pay attention to the fact that state systems in different countries sometimes have a similar, democratic form, ensuring the optimally free introduction of new technologies, in conditions of monarchist or totalitarian states, digital progress can be as severely limited and fully controlled by the relevant government structures (especially in matters relating to danger), or such a form can, on the contrary, contribute to the high rate of introduction of new technological structures through government support and protectionist policies that help local managers, entrepreneurs, or state-owned specialized organizations to effectively solve tasks without thinking about economic competition inside the country. A third form of state participation in the transition to a new economic structure is also possible. It will take place in mixed systems where the state and the market in equal shares as the interested parties carry out the process of transition to the new economic order. In this case, it is important to analyze the balance of actions of both parties, participants in the process. If the digital introduction begins with small start-ups and does not require maximum financial assistance, the state regulates the growth of modern sectors of the future economic order by introducing preferential taxation and the provision of certain bonuses in the employment of specialists whose actions are in demand in the emerging new economic market. These preferences, of course, must have a limited period of validity, otherwise...
- The fourth area in which a dynamic change in culture happening under the influence of innovation processes is politics. On the one hand, a close symbiotic relationship between state and political processes is always present in the life of society. But we will consider the political sphere, as a social institution, for which the introduction of technological tools makes it possible to introduce new principles for organizing political activity, in the literal sense of the word, democratizing the processes of interaction between

politicians and the electorate. Another specific feature of political activity is its planned character. Therefore, politics as a prognostic and realistic activity, previously divisible mainly for tactical (short-term) and strategic (long-term) tasks in the information society, is enabled not only by almost instantaneous implementation of tactical tasks with the help of information technologies, but also by the prospect of an objective assessment of political programs designed for the long term perspective.

- The fifth sphere is the right. The progress of society towards achieving a significant improvement in the quality of citizen life takes place only when gains in this area have a reliable legal basis: a system of legal protection of authorship of inventions and developments created, functioning, a legal and affordable way to start an innovation business, legal social guarantees for entrepreneurs and employees in the field of innovation and new professions, etc.; legal sanctions for illegal forms of business and violations of the countries basic laws that are in the way of the information society; lawmaking and the legality assessment of new activities in the field of innovative technologies.
- The sixth area of culture in which it is necessary to make an analytical assessment of the informatization processes is education. In modern society, educational programs are not only in schools, but also in specialized educational institutions, higher education institutions, and also in vocational retraining centers actively use digital and other modern technologies. But often this is a problem in preparing the educational programs balanced by the vector “technologization - humanitarization” of education, “theoretical - applied” knowledge.
- The seventh sphere is the science. It is necessary to carefully study the processes of digitalization and informatization influence on science itself as a specific type of social activity that determines the qualitative transformation of modern culture. Modern science is becoming a form of practical innovative breakthrough leap into society with a fundamentally new technological order. But, the transition by itself to cutting-edge technologies of scientific research and the realization of scientific discoveries in practice in production will not do the work that should go through the person.
- The eighth sphere is the spiritual life of society. The information society, whose development is constantly illuminated by us, positioning the process as progressive and irreversible is a phenomenon and fertile ground for the occurrence of a serious social conflict in a society where religion remains as an integral part of culture and spiritual life. Technical progress becomes unacceptable in those communities where religious institutions have a significant impact on social life, political processes and the believer himself. Progress in this case becomes a threat to the

existing cultural and national way of life. If there are few representatives of culture and people, or there is a national conflict in the external space, or within the country between representatives of different nationalities or confessions, informational innovations will be perceived as an unequivocal threat to society, which becomes the beginning of serious social conflicts, including military clashes.

- The ninth sphere is the process of the information progress influence on art. The sphere of artistic creativity varies greatly under the influence of the STR. Modern digital technologies are no exception - the art is still the most receptive area of culture, responding to the assimilation and introduction of technological innovations that, in turn, contribute to the emergence of new types of modern art - multimedia and computerized forms of expression for a person who lives in an era of technological breakthrough and most adequately as the consumer responds to innovations in traditional art forms, and to the emergence of new art trends and types.

It should be born in mind, these spheres of human cultural space do not fully reflect the picture that exists on a global scale. But the spheres of the cultural landscape that we have identified make it possible, within a certain format, to answer questions about the influence, mutual influence, or lack of influence of the modern stage of the scientific and technological revolution on society, different in terms of development and way of life, living on one planet with us and having their both cultural and historical conditional features that determine the pace and scale of technical and technological progress.

### III. RESULTS AND DISCUSSION

Within the framework of the most relevant spheres of cultural life that we have identified, the influence of technological progress on the habitat of mankind should be considered at three macro levels:

#### A. Nature

STR, technological revolution, computer revolution, digital revolution are the terms most often found in special scientific and popular-science literature. And what are the environmental consequences of the activities that “progressive man” carries out pursuing its goals? Demarcation of extreme approaches in assessing the impact on the natural habitat of modern man is that two extreme poles have nature. The first approach is “Ecotopia” [7]. Its essence is to maximize the preservation of the natural nature, minimize and reduce all processes in the economy, curtail production and focus on the natural agricultural production of goods using outdated technologies; and other areas of culture, material production, leading to disruption of the natural balance. The variations of the conservative approach are very diverse - we can see how to maximize environmental protection and restoration activities before banning modern agricultural technologies and especially GMO crops as causing unacceptable effects of natural human habitat. The second extreme approach was

formulated by J. Ellul [8]. He introduces the term “Technotopia”, or the technocratic society into the scientific discourse [9]. It also reflects only the limit degree in changing the organic nature and the complete subordination of its ecosystems to the regulation by the human community and insists on cardinal methods of such impact. For example, the conscious regulation of the flora and fauna number, up to the preservation of “unclaimed” as a resource of flora and fauna representatives in the number of test specimens, will be related to this type of projects. The vacated space is proposed to be given to agrarian crops and livestock farming, which will reproduce the necessary nutritional resources as quickly as possible to ensure the growth of humanity. Even more extravagant the ideas of replacing the natural products consumed by mankind for biological activity with chemically synthesized artificial proteins “printed on the printer” steaks, fish, etc. delicacies are considered. The readiness of a healthy person organism to assimilate such culinary delights remains beyond the brackets, as well as the problem of ecological imbalance being planned to condemn the planet and our common future. Surely, one of the “technotopy” variants is the regulation of the person number himself. The third type of planned future is a realistic approach that demonstrates the most adequate part of the researchers. In the 70s of the last century, the development and critical analysis of scenarios for the future mankind development has acquired a systemic character in the format of the “Rome Club” that is non-governmental but international organization having certain leverages, whose founder is considered the Italian entrepreneur Aurelio Peccei [10]. The concept of “sustainable development” was developed during the discussion on the optimal directions for the civilization development [11]. It appears to be one of the most realistic scenarios of human development in the near part of history, but

### B. Society

Planning for the nature future is impossible without an approximate plan regarding the humanity future. Therefore, society is the macro level, which is necessary to be investigated and critically rethought.

- We can speak about society using time parameters: the past – the present – the future. The history of the society development allows us to accurately characterize the type of social and cultural structure of any nation, region and humanity as a whole, to find and indicate essential prerequisites for the emergence of more progressive types of society economic and cultural organization. Modernity also presents enough opportunities for an analytical study of existing facts, processes, phenomena, dynamically changing reality before our eyes.
- We can consider the criteria for its variability on a scale: global-local-national. As Yu.D. Granin writes: “...putting globalization on a par with such trends as “localization”, “nationalization” and “regionalization”, it is interpreted as “a process (or a set of processes) that embodies the transformation of spatial organization social relations and interactions ... generating

intercontinental flows and structures of activity, interactions and manifestations of power” [12].

- It is possible to use a civilizational approach, where a given system of social life phenomena, characterizing it as meeting the systemic criteria of a “civilized society”, helps to evaluate certain peoples and regions as having a high degree of civilizational development, or developing confidently in this direction, or only partially meeting these criteria. But this value system is usually used in conjunction with the study of society as an original carrier of the cultural structure, preserving its authentic traditions, history, cultural structure, language. Therefore, it is more appropriate to talk about a comparative analysis of two complementary approaches in this case.

### C. Human being

Another, and probably the main approach to the study of the degree and quality of the information and digital technologies influence as globalization elements is the man problem analysis.

The modern society change processes, prescribed in several scenarios relating to resource constraints in human civilization development, possible degradation of social development and catastrophic development results, in any case, pay significant attention to the problem of a man himself [13]. Civilizational way of human development in the direction of cultures and substitution unification of its specificity and diversity by a set of civilized life formatted structures, make such process analysis of the information society formation in the main areas of culture lifeless.

The process of globalization must always be correlated with common humanistic principles and values. This is where an ideal substantial adjustment of the intrinsic value of scientific and technological innovations as an expression of one of the technogenic culture basic values arises.

- The first approach to considering a person as an object included in global changes represents us a person who inertly follows consumer culture and is a type of “economic man”; his rationalism relates only to the sphere of rational consumption, which is determined in conjunction: income - purchasing power - prestige consumption. In such a person paradigm, we can speak not about culture as a factor of humanistic influence, of value reorienting the globalization informational stage, but about a civilized narrow economically oriented person. Such an individual provokes catastrophic scenarios of human evolution. A small quantitative reduction in consumption, which is recommended by the concept of “sustainable development” is not a binding directive for such a person. The futuristic pessimism of such an individual’s activity is also suggested by the fact that this behavior stereotype is widely replicated as a socially approved model of a citizen of “first world countries”, interactions and manifestations of power” [14].

- The second type of a person is a rationally oriented individual who is aware of the degree and scale of his influence on society and the environment, having a model of a “person consuming” in front of him and an opportunity to assess the negative consequences of such a model implementation. An alternative to individual development in such societies can be a revised and improved individual behavior strategy, including the need to link the society progress with environmentally responsible behavior, since the nature preservation depends on the person. More often this type is found in the so-called developing countries making the transition to the postmodernist way of life. Here, at the level of society and government policy, there is an understanding that the transition to a new technological order can and should be implemented by other rules. In any case, doubling the number of consumers is a direct path to irreversible global environmental and demographic consequences.
- The third type of a person is the population of the third and fourth world countries. For them, information technologies in the economy development are an unachievable level of material well-being of society. Therefore, they use society consolidation based on the national cultural code as an alternative regarding the hopeless lag behind the technologically advanced countries [15]. In this case, a person belonging to the population of a poor country will be proud of his language, history, customs, national identity as a special heritage of culture and ignore technical progress as a force threatening the preservation of national identity.

#### IV. CONCLUSION

Unfortunately, it does not seem to be possible to analyze all the culture spheres that we have objectively listed in detail in the text of one publication, where, the information society formation process is going on with varying speed, intensity and result. The academician V.S. Stepin points out this space where the synthesis of new values is, “arising in science

within the framework of modern culture. Not the rejection of science, but its new humanistic dimension is one of the important aspects of the search for civilization development new strategies. New opportunities for the culture dialogue are also opened up in these changes of scientific rationality” [16].

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