

DIGITAL TECHNOLOGIES: CULTURAL APPROACH

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Abstract: The article aims to analyze conceptual approaches to the interdisciplinary direction of digital culture, its main models, and practices. Digital technologies transformed all spheres of society: culture, economy, political sphere, science, and education and gave rise to the phenomenon of digital culture. Various conceptual models and practices characterize its manifestation in each of these areas. The article presents the definition of digital culture as an interdisciplinary area of research, considers the specifics of its main sublevels, and explores the trends in its development as a practical implementation of its conceptual models in social ideology, university education, socio-humanitarian discourse, and art. The penetration of information technologies into the activities of cultural institutions is universal. Therefore, the article presents a new experience in implementing human activity, which became possible due to the introduction of digital and information and communication technologies. Particular attention is drawn to the need to use a holistic and systematic approach to digital communication to update the cultural experience, upbringing, and education of a trained viewer and listener.

Keywords: Culture approach, Digital art, Digital culture, Digital era, Digitalization, Digital technologies, Hypertext, New experience.

1 Introduction

The modern era and modern culture are defined by media representatives and ideologists of the information society as digital, by the name of technologies that have replaced analog ones and are rapidly changing forms of communication, the urban environment, values, human nature, social relations and the world around. The very term "digital culture," borrowed from the publications of Gere [6], concerning the use of information and media technologies, does not raise objections. However, when applied to culture as a whole, not as a metaphor, but as the essence of culture, or used as a marker of the modern era, this raises serious objections, philosophical and conceptual.

Technocratic thinking, devoid of reflection, leads to the strengthening of technology and the weakening of Man. The name of an epoch, society, or culture should reflect the achievement goal (as a "knowledge society," for example) and not a means, such as technology. To determine the goal, the vector of social development, at the present stage, it is necessary to deepen socio-humanitarian research because the nature of reality is dynamically transforming before our eyes. It remains sealed for the community of scientists, like the nature of human consciousness, as well as the nature of the interdependence of culture with the states of *language – thinking – technology* [19]. Due to the influence of the Internet and digital technologies on public life, we are witnessing a change in the standards of scientific justification and the existing structure of knowledge [4]. The boundaries between the private and public spheres of communications are being erased, and a significant range of interactions is being transferred from social reality to forms of virtual communication on the network. The strengthening of techno-discourse in culture is accompanied by new integration of socio-humanitarian knowledge and technical sciences (humanitarian computer science, etc.) [10].

From the 50s of the 20th century, digital culture is formed as an interdisciplinary direction, within which diverse conceptual models are formed. Forms of digital culture represent diverse practices in the artistic field (in the form of techno-artistic hybrid formations, such as post-digital art, video installations); in

scientific knowledge (digital humanities, contextual epistemology); and in education (Art & Science, gamification) [11].

The purpose of this study is to analyze the concept of digital culture, its main conceptual models, and their practical implementation.

2 Materials and Methods

The study of digital culture and its development trends uses the methodology of comparative analysis of its various conceptual models based on a historical approach. The criteria for highlighting the main stages in the development of digital culture are:

- The level of development of digital technologies;
- The nature of the relationship between technology and socio-humanitarian knowledge;
- Social needs in the development of digital culture forms;
- Scope of digital culture;
- The breadth of coverage (distribution) of digital culture.

The analysis of the periods of development of digital culture uses the ideas of Toffler, McLuhan, Naisbitt, and others about the impact of information revolutions on changing types of communication, public consciousness, and culture in general [7, 8]. In addition, the methodology for analyzing the interdisciplinary field of digital culture includes studying its various conceptual models. To this end, the article is carried out:

- Consideration of the main stages of the formation and development of digital culture;
- Definition of the concept and principles of digital culture;
- Allocation of its leading models (sublevels);
- Analysis of the conceptual apparatus of this interdisciplinary field of research;
- The study of the mechanisms of integration of digital culture and traditional cultures.

A critical review of approaches to the concept of digital culture is based on the principles of philosophical anthropology and the humanities on the nature of the relationship between language and thinking, on the one hand, human nature and its objectification in technology, on the other [3].

The analysis of trends in the expansion of the use of digital culture uses materials from empirical studies of various practices in the field of science, education, and art using domestic and foreign scientific journalism and websites of leading European and American universities. An analysis is made of the positive achievements and risks associated with using strategies based on digital technologies.

3 Results and Discussion

In modern society, digital technologies are widely used in the production of artifacts, scientific communications, education, business, the field of ideology and politics, and in everyday life [6]. Taken together, they represent various phenomena that represent digital culture models that have replaced the culture of industrial civilization.

The formation and development of digital culture reflect the interweaving of strategies for scientific and technological development, political decisions, philosophical discourses (from the New Age to postmodernism), and the influence of protest movements on the transformation of values (counterculture movement, psychedelic revolution, youth protest movements of the 2nd half of the 20th century) [20]. The periodization of the development of digital culture includes the following stages:

- 60–70s 20th century (creation of technological infrastructure for the implementation of the information

society project – personal computers and computer networks);

- 80-90s – the development of digital technologies that characterize digitalization as a critical direction in the development of a variety of practices in culture;
- 2000s – present – anthropological revolution as a change in the "nature of cultural consumption" and human nature [13].

Among the approaches to the analysis of digital culture, two main trends can be distinguished: the consideration of digital culture within the framework of the transhumanism movement, in which digital culture is defined as a totality formed by NBICS-convergence technologies, which are based on the process of digitalization of man and the environment, the transformation of culture and the technosphere into an artificial world.

A more balanced approach considers digital culture as a variety of conceptual models and their practical implementation in various areas of culture, taking into account the adaptive capabilities of culture and human nature (based on the law of techno-humanitarian balance). In the analysis of the development of digital culture, Charlie Gere, one of the founders of this area of research, proceeds from the principles of neo-Marxism and theories of the post-industrial (information) society as the methodological foundations of the analysis. Gere defines digitality as a marker of the culture of the information society, including artifacts, meanings, and communications that distinguish the modern way of life from other forms of culture [6].

Some authors see the methodological task of studying digital culture in describing the "culture of digital automata" and determining the critical points of its transformation in the 21st century into a "culture of artificial life" [1, 3]. The concept of "single digital culture" is defined as a totality of artifacts and symbolic structures "based on digital coding and its universal technical implementation, totally included in the institutional system and contributing to the maintenance of certain values, mentally fixed and creating forms of self-determination" [5].

The principles that characterize digital culture as a self-determining system of digitalization processes include the idea of the convergent nature of its phenomena; the technological imperative as a total technologization representing value and normative order; the idea of the limitations of human nature that can be overcome technically; the desire of science and art to create technical artifacts and techno-artistic hybrids as plausible examples of the living. The core of digital culture is the "universal computing machine," which acquires appropriate cultural interfaces at various levels. This author presents these methodological principles as a "promising research program for studying digital culture" [20].

The question arises: what place is assigned to a person in digital culture? Man in the civilization of automata turns into "reproducing organs" of the machine world, allowing him to multiply and constantly develop more and more new forms. Examples of the expression of extreme technological determinism in the analysis of digital culture are the collection of articles "Global Future – 2045. Convergent Technologies (NBICS) and Transhumanist Evolution" [15] and some other works [8] are programmatic for supporters of transhumanism.

Understanding the essence of culture is very important in terms of worldview. The genesis of culture is meta structures that manifest themselves in culture and act as a link between man and culture, man and the universe. The historical development is based on a cult (connection with the higher world), thanks to which the evolutionary development of humanity and its transition to a higher level (noosphere, God-manhood, transcendental level of being) is carried out. Following the principles of humanism, the extension of the concept of digital culture to culture as a whole is unacceptable in methodological and ideological terms because technology (including digital)

cannot lie at the basis of culture and determine the meaning of human evolution.

Not all levels of culture are subject to digitalization (the sphere of a person's transcendent, spiritual transformation). Due to the loss of orientation, spiritual needs are exhausted and preoccupied with everyday life, the desire for dominance, and destructiveness. Violation of the techno-humanitarian balance in culture leads to totalitarianism, wars, and the end of history [14]. Within the framework of the humanitarian approach, digital culture is defined as:

- The transition from analog forms to digital formats, accompanied by the transformation of the hierarchical structure of culture ("core" – "periphery") into the clustering of its forms and network communications;
- The elimination of the "symbolic order" and the establishment of the "order of things" [12];
- A wide field of artifacts and practices that have appeared due to digital technologies (computer games, the Internet, technological art, humanities, computer science, etc.), the analysis of which allows us to determine the specifics and subject of digital culture research.

The impact of digital communication technologies on culture grows into a survey of interrelated and interacting cultures, digital and "non-digital," and various research paradigms in cultural studies and British Cultural Studies [7]. The purpose of studying the phenomena and conceptual models of digital culture from the standpoint of a humanitarian approach is:

- Analysis of digital culture, affecting various aspects of the life of a modern person;
- The study of the changes taking place with culture in the era of the spread of digital technologies;
- Consideration of the nature of the relationship between digital culture and the culture of previous eras (for example, new media are associated with the culture of the avant-garde);
- The study of the problems of the transformation of human identity in the context of the spread of new communication technologies;
- Gender, ethnic, and age aspects of the use of digital media;
- Features of the formation of online communities;
- Connection between the Internet and politics;
- Study of a wide field of practices: computer games, computer graphics, technological art, Science & Art, etc.

The level structure of digital culture is an underdeveloped issue. The analysis of the levels of digital culture is a study of the influence of the Internet and convergent technologies (taking into account their ambivalent transformational possibilities) on changing a person's identity, social reality, and culture as the life world of modern humankind. The level structure of digital culture is based on the difference in the typology of objects, in which he singles out the material level (which contains technical artifacts from smartphones to supercomputers, including software), functional (represented by institutions), symbolic (includes languages), mental (reflects the mentality) and spiritual (represents values) [14].

The question of the relationship between these levels the author leaves open. As sublevels of digital culture, it is possible to single out the areas of social interactions in the field of culture as interdisciplinary practices in the era of the digital revolution, including scientific and technical digital culture and communications, digital political culture, artistic digital culture, legal digital culture, digital culture in the field of education. The definition of a "digitized person," found in techno-discourse, requires an analysis of the acceptable boundaries of the digitalization of culture and a person. This problem involves the analysis of questions:

- What is the essence of digitalization, and what is its role in culture's progressive development/regression?

- Does history have a goal, and what are the modern strategies for achieving the goal?
- What are digital technologies' positive and negative impacts on the development of man and civilization?
- What is the relationship between different levels of digital culture?

In analyzing these issues, one should focus on the relationship between "internal" and "external" factors in studying human nature and its transformation under the influence of digital technologies. The world as an object is presented to a person due to the processes of objectification of language, thinking, and other mental functions, which are based on the transformation of various types of energies into semantic structures, information, and objects of reality [8].

A person is potentially a multidimensional model, in which the number of manifested levels, reflecting one Spatio-temporal dimension of events, on which a person can display himself, is determined by the evolution of the brain and the field of its creative activity [12].

What is the process of digitalization that underlies digital culture? It is associated with the development of information technology and the Internet. The word "computer" is translated as "computer," although modern computers, in addition to calculations, perform a wide range of operations under the general name "artificial intelligence." The essence of digitization is the mechanization of time. Man is a student of time. Any technology has ambivalence, and digital technologies can also be used both for good (digitization of museum and library archives for unlimited user access) and with a threat to humans (human digitization, the use of "big data," and biometric data to strengthen control). In general, the positive impact of the use of the Internet and information technologies in various fields of culture was expressed in the formation of the information society and the unification of humanity into a global anthropological entity [16]. The use of digital technologies has had a positive impact on the development of scientific communications and the provision of broad access to knowledge bases; in the preservation of cultural heritage (museum collections, library funds).

The formation of new interdisciplinary areas has enriched the field of scientific research under the influence of digital technologies. The emergence of new social sciences and humanities paradigms, such as computational history, humanities informatics, computational linguistics, cyberpsychology, etc., testifies to the digitization of those areas of human knowledge in which computational technologies are used. In addition to preserving cultural heritage, digital technologies are used to perform various functions, from enhancing knowledge to enhancing social control [8].

These trends require research and increased responsibility of representatives of the social sciences and humanities in their development, control, and adoption. In the university community, digital culture is formed under the influence of informatization and mediatization of the educational process and is part of the corporate culture. The impact of the electronic environment on a person is enhanced by the inclusion of students and teachers in the systems of semantic networks, the Internet, online courses, and interactive media technologies as ways of organizing the educational process, research work, and leisure activities. Immersion in the electronic environment changes the very nature of thinking and the principles of knowledge substantiation (machine thinking, computer consciousness).

In electronic culture, "the spiritual and material components are formatted by artificial intelligence – a technology for extracting, representing, storing, processing, transferring "knowledge" and, in general, "managing" them." The negative impact of digitalization is manifested in the mechanization of the system of knowledge, thinking, and social memory. The Internet as an exteriorization of the internal content of the global anthropological subject represents the heterogeneous content of

the hypertext, including aggression and various kinds of network "garbage." The introduction of implantable electronics poses a threat to social stratification. The development of networking and computing technologies through big data and the Internet of things poses a potential threat to tightening societal control.

The problem of digitalization can be considered the essence of the anthropological revolution. Digitalization radically changes the model of human cultural behavior and the system of social interactions in culture. The Internet blurs the boundaries between hypertext and contexts, allows infinite expansion of contexts, and relies on network logic. The experience of communication in virtual reality transforms the existing ideas of the individual about the world, fiction, and interactions with other people. The laws of virtual reality are not identical to the laws of the physical world. However, they are adequate to the logic of machine languages that reproduce "the constructive role of cycles as the building material of functional processes." Virtual experience returns a person to the cyclical model of time perception, characteristic of the mythological culture of ancient societies. The ability to adapt to the assimilation of large information arrays and the intensity of changes in order to preserve identity requires a person to increase the reflexivity of his variability [17].

The Internet has an impact on changing interactions in culture, including politics. The influence of the World Wide Web on political culture is expressed in forming a new image of politics, and new forms of political culture, in need of other political leaders. Furthermore, significant transformations under the influence of digitalization are taking place in the artistic life of modern society. On the one hand, digital art reflects the integration of various types of art (photography, cinema, video, music, painting, and literary genres), forming multiple configurations of new techno-artistic hybrids through their computer processing. On the other hand, the generated hybrid forms of digital art, thanks to interactivity and wide availability for their production and distribution, are positioned as a challenge to "high" art and assert the power of technology over creativity. In recent decades, publications have appeared devoted to "post-digital culture," which can be considered as an attempt to reproduce artifacts using digital technologies that are as close as possible to the real appearance of their prototypes [2]. As an example, for the development of digital culture, representatives of the Valery Geghamyan Foundation created the official website of Valery Geghamyan (<https://valeriyeghamyan.com>), which allows for the organization of active research, restoration, expert, educational and popularization work [21]. This practice analyzes various aspects of techno-artistic hybridization in such areas of art as design, cinema, music, and video.

The least studied is the problem of digitalization as the transformation of various types of energies during the interaction of a person and network devices. Some aspects of the consideration of this problem are contained in the works. By transferring to technology the performance of some of its functions (bodily, sensory, intellectual), a person pays by gradually becoming an appendage of technology [18]. The digitization of a person is aimed at limiting human freedom and is a dangerous trend. To overcome it, it is necessary to educate the needs for the use of digital technology products and a culture of communications. Humanity will once again have to respond to the challenge in order to preserve itself as a community of intelligent people [9]. To do this, it is necessary to preserve the continuity of the foundations of culture, ensuring the connection of times, uniting the diverse spheres of public life, and representing the bonds of civilization.

4 Conclusion

As the analysis shows, the concept of "digital culture" reflects structural changes in culture organization in the era of digital revolutions. Still, it cannot determine the vector of development of humanity as a species and represent culture as a whole; it means the diversity of models formed by integrating digital technologies with other forms of knowledge and activities.

Digital culture represents an interdisciplinary area of research. The concept of digital culture with a variety of conceptual models reflects two main approaches:

- From the standpoint of technological determinism and transhumanism, the digital age culture is defined as a "culture of digital automata" based on digital coding and its universal technical implementation, transforming the 21st century into the culture of artificial life;
- From the point of view of representatives of the humanitarian approach, digital culture is defined as a set of practices in modern culture that arise at the intersection of artistic culture, computer technology, and semiotic systems of the information society in connection with a change in worldview and moral attitudes.

The development of Digital Humanities as one of the areas of digital culture indicates digital research methods. They are used in all areas of the humanities and social sciences, including digital technologies.

The modern digital educational environment as a field of study and the sphere of scientific communications due to the achievements of NBICS technologies, which represent the matrix of social transformations, contributes to the virtualization of the educational process, the change of subjectivity, and values. Digital art reflects the mutual influence of techno-artistic discourse, politics, and science. It is not dominant in the artistic life of modern civilization, but it has significant transformational potential.

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