# DIGITAL MAN AS A PRODUCT OF THE INFORMATION SOCIETY

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**Abstract:** The article substantiates that the contradictory realities of the formation of the digital space are reflected in all spheres of life of society and individuals and determine the trends in the formation of digital man. The digital man is considered as the main object and subject of information relations in the information society in the latest stages of its development. This is based on the postmodern type of homo intelligent, able to process information, creating new information phenomena, relationships and structures. It is shown that the convergence of artificial intelligence technologies, machine learning and powerful databases capable of using an unlimited amount of information for processing, classification and muluple usage is a fundamental factor in the transition to digital man in the information society.

**Keywords:** digital man, information, information processes, digital space, virtual reality.

## Introduction

Today, a new global social reality is being actively formed, which is dialectically combined with the local social reality. The world at the global and local levels is facing a complication of socio-cultural dynamics of society, unprecedented bifurcations. In the context of globalization, some particular cultures, undergoing changes, begin not only to actively oppose, but also to reflect, seeking to maintain their identity.

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New socio-cultural realities bring existential uncertainty and risks. Modern man has to live without stable guidelines, long-term factors of order, generally accepted authorities. There is a growing awareness that new cultural realities are no longer unequivocally "good" or "hostile"; they are ambivalent, because they bring not only obvious benefits, but also sometimes hidden dangers and vice versa<sup>1</sup>.

The main technological trends in the development of the digital environment are the expansion of telecommunications infrastructure, the progress of computer, network and mobile technologies, the use of technological innovations in complex socio-technical systems. At the same time, the emerging digital space plays a crucial role in the new information picture of the world, when information acts as an engine of social and technological progress and becomes an objective characteristic of material systems and their interaction.

From the standpoint of postmodernism, a person lost in countless flows of information and communication does not have a certain system of values and ideas about the rights, duties and responsibilities for actions, and therefore loses the sense.

Today's postmodernism is a specific worldview of the information society, the distinguishing feature of which is pluralism, i.e. the assumption of simultaneous coexistence of different points of view. This pluralism is the very essence of postmodernism, and at the same time it is its the most vulnerable place. Many aspects of the vulnerability of postmodernism are due to the fact that its worldview is not a universal frame of reference for society as a whole and for the individual. The degree of its extention is limited by the availability of access to information resources. However, today there are almost no places not covered by the information field.

The development of television, the Internet, and mobile communication networks is becoming a factor that indicates the entry of information culture into the lives of the majority of the population and the digitalization of the individual under the influence of technological progress. If previously it was necessary to make special efforts to go beyond the existing models of identification, the use of modern electronic gadgets greatly simplifies the choice of a role model<sup>2</sup>. The downside of the ease and simplicity of achieving a new model of identification is the lack of cultural and existential experience in the use of tools that provide new

<sup>&</sup>lt;sup>1</sup> O. Danilyan, A. Dzoban, *Existence-network dimension of information security in modern society*. Skhid. Analytic and informative journal, 2021, 1(1), p. 14.

<sup>&</sup>lt;sup>2</sup> O. Dzoban, *Digital man as a philosophical problem*. Information and law, 2021, 2 (37), p. 10.

opportunities for a comfortable existence in global networks and information flows.

All this provoked the loss by the society of previously established social rules, instead presenting the need for the individual to search for new ways of self-realization in the current digital world. New digital technologies that penetrate into the established formats of social relationships provide almost unlimited opportunities in choosing ways to construct one's own identity. In the information space there are tendencies to transform the representation of the individual in its virtual form, which performs the task of necessary adaptation in the changing information flows of the global digital space. In conditions of the current development of society, digitalization of man is an important provision for social adaptation to the new challenges of the postmodern world.

# Methodology

The purpose of the article is to continue the interdisciplinary discourse on understanding the relationship of digital man with the attributes of the information society: virtual reality, cyberspace, new forms of culture, network communications.

The methodology of the study of digital man in the context of the information society dynamics involves the consistent use of general scientific, philosophical and special methods and approaches, which allows to achieve the above goal.

The initial stage of application of the methodology is a comparative analysis of the most significant scientific publications, which relate to various aspects of the information society dynamics, understanding the essence and features of modern man in the latest socio-cultural conditions and more. Special attention is paid to the coverage of information processes and features of the application of new information technologies in social reality.

The next stage is to study the impact of the main attributes of the information society on human life. The application of systemic and structural-functional approaches made it possible to investigate the contradictions of such influences as a consequence of the growing interaction between man and complex technical systems. Analytical-synthetic method, as well as methods of comparison and analogy provided an opportunity to compare theoretical and methodological conceptions of understanding the essence of the development of both the information society and modern man.

At the final stage, the methods of all three levels were comprehensively applied in substantiating the directions and prospects of human development in the information society, as a result of which the arguments in favour of the authors' hypothesis were generalized.

On the basis of complementarity of various methods there are the grounds to conclude that new forms of manifestation of the essence of *homo informaticus* should be considered as multifaceted and ambiguous: on the one hand, they are a continuation and new dimension of traditionally formed social processes, and on the other hand, they are the result of sociocultural and technological innovations able to fundamentally affect the quality of life of the individual.

# Theoretical basis

The term "digital man" was first used in 2001 by American writer Mark Prensky<sup>3</sup> to refer to people born after the digital revolution who live in the environment of computers, video games, players, video cameras, mobile phones (smartphones), networks, etc. and who are accustomed to receiving information through digital channels, and all of the above becomes an integral part of their lives. According to Prensky, people born at the end of the last century are different from everyone else. He came to this conclusion by observing schoolchildren and students of the 2000s. They live surrounded by computers, video games, players, camcorders, mobile phones and the Web - and all of these are becoming an integral part of their lives. Prensky called such people "digital natives" - speakers of their native digital language of computers, video games and the Internet. In 2008, Gary Small and Gigi Vorgan published the book "IBrain: Surviving the Technological Alternation of the Modern Mind" in which they highlighted the transformation of the human brain under the influence of changing epochs and also mentioned "digital natives".

Prensky called people born before this period "digital immigrants". According to Prensky's theory, "immigrants", no matter how hard they try, still have something like an "accent" - a kind of "echo of the past", attempts to combine the latest possibilities with those of the past (for example, when a person confirms an email on the telephone or instead to edit text on a computer, print it out and edit by hand).

In 2007, American entrepreneurs Josh Spear and Aaron Dignan introduced the concept of "born digital"<sup>4</sup>, which was later transformed into the Digital Generation. In 2007, Gartner company developed a complex of technologies for the digital person and demonstrated a number of trends in digital technology development at the "IT Expo (Emerging Trends) Symposium" in Barcelona.

<sup>&</sup>lt;sup>3</sup> M. Prensky, *Digital Natives, Digital Immigrants*. On the Horizon MCB University Press, 2001, 9 (5). URL: https://www.marcprensky.com/writing/Prensky%20%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf.

<sup>&</sup>lt;sup>4</sup> Digital natives are those. URL: https://cbo.org.ua/digital-natives-are-those-pereklad-na-rosijsku-prikladi-anglijska/.

In modern works of foreign researchers, the problem of digital man is considered mainly from the standpoint of its application, such as gender differences in digital communications (D. Alvarez, A. Gonzalez, K. Urbani) <sup>5</sup>, or features of the Internet technologies use by the modern man (C. Bonner-Thompson, L. McDowell) <sup>6</sup> and others.

In modern works of Ukrainian researchers, the problem of digital man is also raised repeatedly. At the same time, this problem is mostly considered "in context", i.e. in the field of individual sciences. Particularly, for instance, in previous publications of this article's authors, a person of the digital age was considered from the point of his information rights and freedoms?

For example, O. Golovko considers the problem of digital man in the context of digital and information culture<sup>8</sup>.

K. Honcharenko focuses on the question of how it is possible to view a person in the digital world and what is his/her identity in the relevant determinants, which are manifested in the virtualization and digitization of reality<sup>9</sup>.

- M. Kyrychenko focuses on theoretical and practical aspects of the development of information technology and the areas of its impact on the formation of digital worldview and digital ideology of modern man<sup>10</sup>.
- O. Radutniy proposes to consider digital man in the context of revolutionary inventions in the field of bioengineering, creation of inorganic life forms and (or) living beings that combine organic with inorganic, as well as in the context of the influence of artificial intelligence and digital man phenomena on morality, law and legal status of modern society and on future generations<sup>11</sup>.

<sup>&</sup>lt;sup>5</sup> D. Alvarez, A. Gonzalez, C. Ubani, *The Portrayal of Men and Women in Digital Communication: Content Analysis of Gender Roles and Gender Display in Reaction GIFs.* International Journal of Communication, 2021, 15, p. 462-492.

<sup>&</sup>lt;sup>6</sup> C. Bonner-Thompson, L. McDowell, *Digital geographies of austerity: Young men's material, affective and everyday relationships with the digital.* Geoforum, 2021, 120, p. 113-121.

<sup>&</sup>lt;sup>7</sup> O.G. Danilyan, A.P. Dzeban, Y.Y. Kalinovsky, E.A. Kalnytskyi, S.B. Zhdanenko, *Personal information rights and freedoms within the modern society*. Informatologia, 2018, 51 (1-2), p. 24-33.

<sup>&</sup>lt;sup>8</sup> O.M. Golovko, *Digital culture and information culture: human rights in the age of digital transformations.* Information and law, 2019, 4 (31), p. 37-44.

<sup>&</sup>lt;sup>9</sup> K.S. Honcharenko, *Digital man: the phantasm of identity loss*. Philosophical horizons, 2019, 42, p. 137-140.

<sup>&</sup>lt;sup>10</sup> M.O. Kyrychenko, *The development of information technology and its impact on the formation of digital worldview and digital ideology of modern man.* Humanitarian Bulletin ZDIA, 2019, 77, p. 35-46.

<sup>&</sup>lt;sup>11</sup> O.E. Radutniy, *Morality and Law for Artificial Intelligence and the Digital Man: The Laws of Robotics and the «Trolley Problem»*. Information and law, 2019, 3 (30), p.

- O. Ryabinina, I. Kovalenko and K. Nesterenko propose to study a person of the digital era from the point of view of «... self-negative tendency of the dynamics of historicity, the overflow of the subject's qualities into technogenic material qualities, the abolition of the fullness of oneself by means of an affective-bodily hypostasis and the replacement of being by presence»<sup>12</sup>.
- I. Kovalenko, Y. Melyakova, E. Kalnytskyi and K. Nesterenko focus on the mental and cognitive attitudes of modern man, his/her sensitivity to the social context, where, in particular, a sense of vulnerability, powerlessness, alienation from social ideology, as well as cynical attitude to political processes are formed<sup>13</sup>.

K. Chyzhmar, O. Dniprov, O. Korotiuk, R. Shapoval, and O. Sydorenko examine modern man from the point of view of the balance of his interests and their protection from external and internal threats, primarily informational<sup>14</sup>.

Thus, the obvious need for a comprehensive interdisciplinary understanding of the phenomenon of digital man and at the same time highly specialized field orientation of modern studies of digital man of the digital age have led to philosophical interest in this problem.

### **Results and Discussion**

The transformation of the "statistical society" of the XIX century into the "cybernetic" society of the XX century radically changed the relationship between information and objective reality.

The Internet and the media not only inform a person, but also create certain realities into which the person is immersed. Within the framework of such - almost virtual - realities, consciously, but more often unconsciously, not only human experiences, but also a man's thoughts and worldview are programmed. In this regard, the view of K. Harbuzenko is quite correct, who argues that the world in which modern man lives can be represented in three spheres - the world of things, information and the world of the symbolic. Between the three mentioned worlds - the world of things, the world of information and the world of symbolic - there are filters that make it difficult to move from one world to another. Thousands

<sup>78-95;</sup> O. Radutniy, *Legal status and characteristics of a digital human*. Information and law, 2021, 4 (39), p. 35-51.

<sup>&</sup>lt;sup>12</sup> O. Ryabinina, I. Kovalenko, K. Nesterenko, *Metamorphoses of historicity in modern culture*. Revista Notas Historicas y Geograficas, 2021, 26, p. 190.

<sup>&</sup>lt;sup>13</sup> I. Kovalenko, Y. Meliakova, E. Kalnytskyi, K. Nesterenko, *On conspiracy thinking in the phenomenology of modern culture*. Cogito, 2021, XIII (3), p. 67-83.

<sup>&</sup>lt;sup>14</sup> K. Chyzhmar, O. Dniprov, O. Korotiuk, R. Shapoval, O. Sydorenko, *State information security as a challenge of information and computer technology development*. Journal of Security and Sustainability, 2020, 9(3), p. 819-828.

of events take place in the real world, but only a few of them will pass into the world of information. In turn, hundreds of events take place in the information world, but only a small part of them passes into the world of symbolic. An event noticeable in the world of things can be absolutely insignificant in the world of information, and vice versa. And since in the world of information we are dealing more with the individual memory of man, and in the world of symbolic - with the social, the world of symbolic acts as a measure for the other two worlds. Computer technology and the transition from the model of "knowledge" to the model of "information" play a significant role here<sup>15</sup>.

The digital space, with its priority of mobility in modern society, can reflect not only the new social freedom, but also the comprehensiveness of control mechanisms. The typical for digital technology feedback easily turns into a functional totality that surpasses the original idea of the unity of the human community, as the time of great figures, grand plans, big projects is over and we have a society of "atomized" individuals who are involved in a kind of Brownian motion, where there are no clearly defined guidances<sup>16</sup>.

In the digital world, the value system has been significantly transformed: religious values have given way to a scientific worldview that has placed man at the center of the world and seen him through the prism of numbers. Attitudes towards nature and solving the problem of immortality have also changed. If before a man sought to adapt him/herself to the environment, to live in accordance with natural rhythms, now he/she acts as a being that adapts, transforms the environment according to his/her needs. The interests and rights of the individual have become the most important, which is reflected in individual freedom of choice in all spheres of life. For example, in the economic sphere, individual freedom of choice means the possibility to choose a profession and type of employment, in the political sphere it means political democracy and respect for universal human rights.

In general, a more complex, reflexive understanding of freedom is emerging in the life of society - "paradoxical freedom". Its essential characteristics are the inevitable imposition and assumption of responsibility for the obvious and latent consequences of risks: the social subject is placed in such living conditions, when it is necessary to constantly choose, can not but choose something or someone based on the

<sup>15</sup> K.A. Harbuzenko, From the intelligence of «numbers» to the society of «numbers»: the numerical magic of Pythagoras as a component of modern quasireligiosity in the Internet space. Science. Religion. Society, 2012, 4, p. 94.

<sup>&</sup>lt;sup>16</sup> V.V. Liakh, et. al. Sociocultural and theoretical foundations of postmodern philosophy. Kyiv: 2017.

factor of immediate or delayed, explicit or latent risks. Evaluation of the choice made vary widely in the socio-cultural space and change over time. A choice that has proven to be functional and effective for one cultural space is not universal for other cultures. Deviation in one value-normative space becomes an innovation in another<sup>17</sup>.

We will defend the position according to which the digital man is the newest stage of development of the person as the basic object and the subject of information relations in the information society at the latest stages of its development; postmodern kind of *homo intelligent*, able to process information, creating new information phenomena, relationships and structures.

In the Ukrainian language, the phrase "digital man" is a neologism, synonymous with the concept of "information man" (homo informaticus) and "network man". The digital man creates new artificial relationships within the limits that he/she can informationally pre-establish, resulting in the emergence of appropriate information structures. The formation of digital man is one of the basic characteristics of the information society, when each of the dialectically interrelated principles of man: physical, mental and social, requires special consideration. Only in this case the new possibilities of the information society can be fully used for the digital man development.

The transition to digital man became possible thanks to the convergence of artificial intelligence technologies, machine learning and powerful databases that are able to use an unlimited amount of information to process, classify and multiple use it. Electronic devices connected to the global network leave digital traces even if they do not have an actual user. With the help of devices of personal, family, industrial, social and other levels there is a digital processing not only of man as an object, but also of the whole world infrastructure for the possibility of its complete simulation and reproduction.

At the present stage of total introduction of digital technologies not only what a person does is changing, but also what he/she is and in what he/she transforms into is changing too. Digital transformations in society have a multifaceted impact on a person and affect all spheres of life: privacy and ownership, changes in consumer behaviour, the amount of time spent on work, leisure and family, the principles of career development and skills development methods. Digital man can change the own corporate ties without being rigidly attached to them; he/she can and is able to build relationships with other people very flexibly, to join different social communities and different cultural traditions. Digital man is less burdened by formed and historically conditioned stereotypes,

<sup>&</sup>lt;sup>17</sup> O. Danilyan, A. Dzoban, Ibid, p. 14.

he/she has more mobile reactions and the ability to manipulate any layer of information, he/she acquires a new abstract form of his existence.

Digital man is confronted with several types of identities that are subject to positive and negative changes under the influence of information and communication technologies (ICT). The main ones are two types of identity: *ipse*-identity (sense of self) and *idem*-identity (more formal identity, depending on the context, environment and situation). Computers accumulate information, create profiles, contributing to the *idem*-identity of the user, who is unaware of these profiles and how they affect his/her *ipse*-identity, which significantly affects the positive freedom of the digital man.

Thus, modern information technology processes change the reality in which a man is, mostly transmit him/her into the digital plane. Eventually, this reality becomes virtual: figurative-personal and metaphorical, leading a person to another round of the spiral of development, while returning it to the realm of archetypes and symbols (numbers).

In virtual reality, spatial and temporal demarcations are gradually disappearing, interstate borders are being erased, new values, patterns of behaviour, and worldview stereotypes are being promoted. The phenomenon of virtualization of the space-time continuum, in which man and society exist, characterizes a fundamentally new type of symbolic existence of man, society, culture. In the right O. Sotnykova's opinion, social virtual reality is a special subculture, with its own ideals, principles, language and style of communication<sup>18</sup>. That is, the "worlds of existence" created by means of computer technology acquire independent significance<sup>19</sup>.

Cyberspace is becoming another infrastructural technology that covers almost all spheres of human life in a networked society. In cyberspace, virtual reality is characterized by a pronounced instrumental nature, interactivity, modification of spatio-temporal characteristics. Virtual reality, shaped by new information technologies, contributed to the creation of a networked society, and the existence of cyberspace is its basis, which affects all spheres of public life and is one of the key determinants of digital man development<sup>20</sup>.

Virtual world created by the latest information technologies completely and immediately involves a person in the process of perception. There is a diversity of the created virtual world, an endless web of moves of the user of information and communication means. Depending on the

<sup>&</sup>lt;sup>18</sup> O.O. Sotnykova, *The sociality of virtual reality. Philosophical vicissitudes.* Bulletin of Kharkiv National University V.N. Karazina, 2002, 547, p. 138-141.

<sup>&</sup>lt;sup>19</sup> K.A. Harbuzenko, Ibid, p. 95.

<sup>&</sup>lt;sup>20</sup> O.G. Danylian, O.P. Dzoban, *Virtual reality and cyberspace as attributes of modern society*. Information and law, 2020, 4 (35), p. 20.

situation, the same context can be viewed from different angles, and this already leaves a certain imprint on the created virtual stream. Accordingly, new situations and contexts that an individual encounters while wandering in the infinite space of the virtual world network require him/her to behave differently each time.

Cyberspace is characterized by a shift in reality, resulting in a shift in the poles of what is signified and what it signifies. The latter, in turn, leads to the fact that the whole meaning of reality is transmited into the plane of the spectacular, and the reality itself loses its basis, and it neutralizes the meaning. The actualization of the virtual as a form of transgression can contribute to the enrichment of the spheres of consciousness and activity of the individual, the expansion of his/her life space and life opportunities. But the actualization of the virtual component of living space and time can be destructive for the individual, as it contains the threat of unlimited, demonic creativity, which can destroy both the individual and the being<sup>21</sup>.

Consumption in the digital space is accompanied by the routineization of information exchange processes through publication, reminders, recognition, links, comments, etc. It changes the ways of human behaviour, its information culture, the nature of perception. Increasingly, instead of searching for relevant information, a person actually consumes the so-called "quick perception" content recommended by members of his/her social virtual community (organized on the principle of a social graph), full of information noise<sup>22</sup>.

A fundamentally new type of symbolic existence of digital man is characterized by the virtualization of living space and time. Speaking of cyberspace, first of all, it should be noted that it is closely related to human perception of the outside world and it is a key factor in the formation of digital man. The latest technologies purposefully at the level of sensations seek to create in the user the most authentic illusion of the reality of the artificial world. The senses are precisely the mechanism by which knowledge about the environment is acquired and ideas are created. If they are purposefully influenced by some kind of artificial stimuli, the combination of these sensations will also be an image of some virtual reality. Thus, as we have argued in previous publications, virtual space is based on the perceptual type of space, which is a prerequisite and the most important condition for it<sup>23</sup>. When the user is immersed in virtual reality, his consciousness lives with information that is perceived by the senses,

<sup>&</sup>lt;sup>21</sup> V. Ihnatko, *Value priorities of human living space of industrial and post-industrial epoch*. Gilea: scientific bulletin, 2016, 111 (8), p. 177.

<sup>&</sup>lt;sup>22</sup> E.Yu. Marina, *Features of the consumption of information in the digital space*. Young scientist, 2017, 12, p. 141.

<sup>&</sup>lt;sup>23</sup> O. Dzoban, *Ibid*, p. 15.

and this information coordinates his position in cyberspace. Signs that are perceived as relevant elements of the world are endowed with meaning, and semantic connections are established between them, and changing the position of the user sets a new flow of information<sup>24</sup>.

The semantic scheme in the internal space arises by obtaining and processing information as a result of the experience of constant human interaction with the outside world. The emergence and development of information technology, specific media has led to a change in human worldview, determined the formation of a new type of space - virtual. M. McLuhan, one of the first to draw attention to the role of information and communication technologies on the worldview of man regardless of the content of the message, concludes: "the Medium is the Message"<sup>25</sup>. M. McLuhan believes that the medium is not neutral. It significantly affects society rather than its content, but the nature of the message transmission. For example, everything broadcast on television becomes "telegenic". The main feature of "telegenicity" is the mosaic of the message, which is a circumstance of breaking the causal links in the human mind and returning it to the structure of pre-scientific mythological thinking<sup>26</sup>.

For example, when broadcasting news, television draws viewers' attention to the past and immediately announces the end result. The result is the illusion that the demonstration of action leads to this consequence. The person in front of the TV screen connects the whole progressive TV mosaic through the resonance of the mutual reflections of its individual elements. As a result, "spherical" space of instantaneous relationships, which absorbs everything that happens on the TV screen is constantly formed and reproduced in the mind of modern man<sup>27</sup>.

In such conditions, a person perceives information as a flow, and modern telecommunications allow a person to construct complex information flows. A striking example here is a person's immersion in the world of the Internet, where he/she begins to perceive hypertext information. In this regard, M. McLuhan calls the new media the human nervous system brought out beyond the body. Indeed, new information technologies do not replace reality, and people, using them, create a new virtual reality in a convenient for them way.

When a person finds himself immersed in virtual reality, "in numbers" as a special environment, there are two possible options for its perception.

<sup>&</sup>lt;sup>24</sup> *Ibid*, p. 15.

<sup>&</sup>lt;sup>25</sup> M. McLuhan, *Understanding media: external extensions of a person*. Moscow: «Kanon-press», 2003, p. 11.

<sup>&</sup>lt;sup>26</sup> M. McLuhan, TV. A timid giant. Modern personality problems, 2001, 1, p. 138-148.

<sup>&</sup>lt;sup>27</sup> Information society and information security / A.Getman (ed.), O.Danilyan, O.Dzeban, Y.Kalynovskyi, LAP Lambert Academic Publishing, 2021.

In the first case, the user focuses on something logical and abstract, universal and similar. In the second case, the user is immersed in the mythological perception of the environment, making emphasis on something unique, specific, emotional and figurative. Thus, as a result, different types of worldview determine different types of structuring, construction of virtual space, as if two projections of the world that do not intersect with each other. The reason for this multiplicity is in the emphasis of attention, placed by each user in his own way. In most cases, the perception and construction of virtual reality is carried out according to the second, emotional and figurative type<sup>28</sup>.

In addition, frequent communication with computer systems leads to informational infection of the individual by "numerical vision of the world": active Internet users become addicted to digital images at the level of logical and mental structures, which leads to mosaic. Switching between different information channels a person constructs a new reality.

Modern man adapts to this mosaic, adapts to the situation - it becomes one of his/her skills. As a result, there are problems with the assimilation, processing and analysis of more in-depth information related to the determinants of the analysis of relationships in nature and society<sup>29</sup>.

Regarding the temporal dimensions of virtual reality, it should be noted that the time of virtual reality can be stopped, due to inversion the time of virtual reality loses its irreversibility, its various layers intersect, merge. In virtual reality, the reverse movement of elements is allowed, the digital man is guaranteed the opportunity at any time, starting with any element and with a firm belief that it will be possible to return to it, play in his birth and death.

Qualitative features of time in virtual reality should also include the presence of certain time cycles (rhythms). The fractal principle, which underlies virtual reality, sets the rhythmic repetition of one structure, its continuous change according to a given algorithm. Virtual reality appears as a process with inverse relationship in which the same operation is performed again and again, and the result of one iteration becomes the initial signification for the next cycle.

Virtual world created by the latest information technologies involves a person in the process of perception completely and immediately. The variety of virtual worlds emerges, an endless web of user's moves. Depending on the situation, the same context can be viewed from different angles and this already leaves a certain imprint on the created virtual stream. Accordingly, new situations and contexts that the user encounters

<sup>&</sup>lt;sup>28</sup> O. Dzoban, *Ibid*, p. 16.

<sup>&</sup>lt;sup>29</sup> K.A. Harbuzenko, *Ibid*, p. 96.

while wandering the vast expanse of the network, require him/her to behave differently each time.

Instant overcoming distance with the help of supertelecommunications and high-speed vehicles allows digital man to spend time and communicate without direct spatial convergence, which turns into existing and constantly updated networks of interaction. Time is largely destroyed by instant communication between computers. Changes in time bounds, the emergence of timeless concepts in the information age are also connected with the latest reproductive technologies of the human body, including through cloning.

Thus, the virtualization of space and time creates so-called "digital continuum" of network communication<sup>30</sup>, the defining characteristics of which are superficiality and flatness. This leads to the fact that the value of information activities is determined by the presence of information, information product in the view of digital man (on the surface of his/her information field) - the rhizomeness of network communications absorbs depth. "Therefore, - as I. Siliutina rightly points out, - in the dense plexus of rhizome connections for the information product, the mode of "present" is extremely important. The past and the future for information and the information product in social networks exist only as a potential. The constant flow of new information removes the old from the surface of information attency. It can be followed by hypertext traces: links, tags, labels that an individual can follow, like Ariadne's thread. But in our time for the average individual it can be a kind of feat, because it requires willpower"<sup>31</sup>.

As a result, we have the fact that the "digital continuum" of the network society has all the signs of hyperreality. J. Baudrillard, who introduced this concept, pointed out in his works that reality in the development of consumer society is replaced by hyperreality in the process of simulating reality and is accompanied by the replacement of reality by simulacra - signs of reality and loss of sense of reality<sup>32</sup> that clearly indicates the gradual evolution of *homo informaticus* to digital man.

An important attribute of the digital person is biometrics - a system of recognizing people by individual physical and behavioural traits, such as DNA, fingerprints, three-dimensional photography of the face or body, voice, photo of the cornea. Biometric transmitters of personal data are

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<sup>&</sup>lt;sup>30</sup> O.V. Riabinina, I.I. Kovalenko, *Homo Virtualis space and post-digital aesthetics of music*. Bulletin of the National Academy of Management of Culture and Arts, 2018, 4, p. 214-221.

<sup>&</sup>lt;sup>31</sup> I.M. Siliutina, *Information activities in a networked society*. Gilea: scientific journal, 2017, 120 (5), p. 172.

<sup>&</sup>lt;sup>32</sup> J. Baudrillard, Simulacra and simulations. Moscow: POSTUM, 2016.

implanted sensors and chips, biometric passports, bank cards, fitness bracelets, smart watches, smartphones, computers, home electronics, CCTV and audio recording cameras. The main area of use of biometric data is the identification of citizens in order to control access and identify violations.

Socio-cultural portrait of digital man is defined by the following technological and procedural characteristics<sup>33</sup>:

- digital man is formed as an information-knowledge carrier and interpreter of a huge amount of information. According to the goal, information is endowed with a certain subjective content, turning into knowledge the basis of development. Information is a resource for the realization of human intellectual abilities;
- in the cognitive sphere there is a common increase in the value of the speed of perception and processing of information, and often to the detriment of the depth of perception;
  - reducing the need to train RAM that can be transferred to devices;
- mobile means of communication acquire the features of a "mental organ" taken out: being without a gadget or mobile phone, a person feels helpless, deprived of memory and communicative function in general;
- loss of interest in the fundamental knowledge of the basics, being satisfied with a superficial knowledge of the problems, ignoring checking by the experience and critical thinking; the formation of a special type of visual "clip" thinking, where the brightness and accessibility of the content is valued above its depth;
- the ability to obtain practically unlimited amount of information in a relatively short period of time;
- virtualization of interpersonal contacts, which, on the one hand, facilitates communication, and on the other creates the illusion of accessibility and ease of relationships;
- transformation of gadgets into an element of the subconscious, an individual external carrier of the collective unconscious;
- transfer of various types and methods of communication to the online sphere;
- increase in the number of pathologies due to envy because of the pronounced property stratification;

<sup>&</sup>lt;sup>33</sup> K.S. Honcharenko, *Ibid*; O.V. Parkhomenko, V.D. Parkhomenko, *The man of the future in the conditions of formation of information-knowledge paradigm of civilization development*. Science, technology, innovation, 2017, 4 (4), p. 3-9; K. Skinner, *Digital man. The fourth revolution in human history that will affect everyone*. Kyiv: Fabula, 2020; *Modern society, man, law in the context of global transformations* / O.G. Danylian, (ed.), O.P. Dzoban, S.B. Zhdanenko, et al. Kharkiv: Pravo, 2020.

- digital man identification occurs through a person's involvement in a particular field of information, virtual and social spaces;
- self-presentation of an individual on the Internet is carried out through a nickname, avatar, page on a social network, due to the freedom of their creation and attractiveness to users.

### Conclusion

Virtualization of life time in the spatio-temporal continuum characterizes a fundamentally new type of symbolic existence of society, culture, man. The digital man, first of all, is a person of new moral values, who immerses him/herself in the virtual reality of simulations and increasingly perceives the world as a digital game environment, realizing its conventionality, controllability of its parameters and the ability to get out of it.

Instant overcoming distances with the help of supernova telecommunications and high-speed vehicles allows organizations and individuals to spend time together without direct spatial convergence, that includes them in flexible multi-dimensional structures that smoothly transit into existing and constantly updated networks of interaction.

Contradictory realities of the formation of digital space are reflected in all spheres of society, individuals and determine the trends in the formation of digital man. The global nature of these processes exacerbates not only the technical and communication aspects of the development of the information society, but also highlights a wide range of complex worldview issues, socio-cultural problems arising from the very fact of the formation of digital man.

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