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ANTHROPOMORPHIC INFORMATION NETWORKS AND CONVERGING TECHNOLOGIES: CHALLENGE TO HUMANITY VS STEP FORWARD?

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Annotation. The impact of convergening technologies on the social processes of the information society is investigated. It is grounded that at the beginning of the 21st century, the globalization of society is realized by means of convergening technologies. They are based on innovative communication technologies, in particular, technologies of artificial intelligence. The converging technologies of social structure expansion transform it into a network architect, where sustainability of social relations is the most important ergument. The recognition of the lack of administrative influence to achieve socially important goals leads to the fact that convergence of technologies is an irreversible part of the new technological way. The strengthening of the informational pressure that accompanies the formation of the network society further removes the person from realization of its potential, replacing critical, rational thinking with stereotyped, formalized information and communication exchange. As a result, the more dispersed (convergent) are social institutions and their networks, the less capable and willing to control them. Humanity was first faced with the challenge of its intellect, ability to create, control, recognize. Is society ready to give part of the management of the virtual network and artificial intelligence to the face of global problems? This question is before humanity. That is why the author underlies the idea that social modernization requires interpretation of convergence as a strategic innovation. Lack of public control over the convergence of networks leads to reverse – diverging processes. It is shown that the latter produce different forms of social alienation. And the emergence of anthropomorphic networks, based on the technologies of big data processing, machine learning and artificial intelligence, sharply pose questions of the future before every inhabitant of the planet.

Keywords: anthropomorphic information networks; converging technologies; alienation; dispositif; sociocultural innovation.

Introduction

At the end of the 20th century – the beginning of the 21st century – humanity was first provided with a universal tool to create, accumulate, process, store and transmit information, which became information networks. After the stage of globalization, it opened up its potential for innovation in the field of IT capacities and represented itself as a space for the realization of social capital. At the same time, the concepts of a conflict-free society, all of whose forces will be directed towards sustainable development, and remain theoretically. One of the reasons for this is the lack of analysis of information network development strategies, which outline the contours of social reality and scientific-technical and technological progress. The vectors of civilization's progress in the development of social relations and the internationalization of scientific discourse determine, in our opinion, the main orientations of social modernization.

Problem statement

The objectivity of such a philosophical assessment of the orientation of social modernization is based on the results of much applied research in different fields of humanitarian and socio-political sciences. Their authors base their view that in the information day social development is based on the institutional environment of innovations. At the same time, if at the beginning of the 21st century innovation activity was understood as separate from social life activity on creation and introduction of technologies, the opinion about the institutional nature of the innovation process is dominant in recent years. This raises the question about the strategic innovations of social modernization as a method of

correlating processes of social self-organization.

Analysis of research and publication

The problem of humanity's innovative act is devoted to a significant amount of scientific and advertising literature. Rather than focusing on specific studies, we find that they are conditionally divided into optimists and pessimists. The authors of optimistic theories are engaged in innovative activity through socio-cultural functions and sufficient potential to catalyze processes of globalization. The pessimistic view of the problem emphasizes the destructive role of innovations in the context of the aggravation of civil disputes, the deepening of the so-called "digital gap", the quality of life, etc.

In our view, these positions can be reconciled if social development is interpreted in a synergistic way. It rests on achieving the loss of social control in the absence of strategic planning for the development of converging network technologies.

Convergence as the concept of societal theories

A global social system that preserves its stability and balance must organize itself. However, the diversification of channels of information dissemination in the network society, as well as the deepening of social differentiation, the integrity of the modern social space is far from obvious. In terms of social synergies, this problem is phrased as follows: Are there attractive social structures in the network society and how are they formed? The response to this question seems clear: social attractors are the result of the coherence (coordination) of social networks [4, p. 213-215]. The condition of occurrence of the latter is a rather significant range of coherence of social networks, i.e., opportunities for their entering into the state of interaction with further coordination of functional parameters. However, in order to ensure the reclaimed condition, an expanded grid of innovative and communication networks is required, which would play the role of universal broadcast of social information.

At the beginning of the 21st century, the mentioned property of networks is realized by means of convergent technologies. And although this concept was first formed in computer science and systems, it has recently become a part of the interests of representatives of philosophical discourse. Let us make a philosophical prescription of the phenomenon of convergence and determine the impact of convergence of information space on the elimination of contradictions of realization of innovative potential of global information networks. After all, the combination and coordination of social networks at the level of information subspaces produced by them is a key condition for ensuring the integrity of the global information environment.

For the first time in the most expressive form the idea of dependence of social networks and their intersection was expressed by G. Zymmel. As a representative of "philosophy of life", the researcher described social dynamics in the form of consistency of cultural and historical conditioned experiences. And although we do not fully share such a social and philosophical setting. We recognize that it has allowed us to identify such regularities of the development of the social system of the beginning of the 20th century, the depth of which can be fully considered only in the conditions of the information society.

Our attention is drawn to the theory of intersection of social circles expressed by the researcher, which he has led from the relation of the individual to his own social environment [6, p. 410–414]. To be at the beginning of one's working life surprised by the uneasiness of society with its unique features. Over time, the personality is even more affected by the pressure exerted upon it by norms,

traditions, social values, lifestyle, morality, law and other regulators. However, learning within the inner social circle, a person notices that belonging to a circle gives them access to other social circles and groups. Having acquired experience in various social backgrounds, the personality returns to the lost uniqueness, as all the circles chosen by it is unique. By outlining the principles of social differentiation in a society based on world information networks. We can conclude that whatever social agents do, the social potential of the colonial social infrastructure and now the network is a common value to them.

As a result of our research, the value of G. Zymmel's ideas. It is the fact that they indicate the convergence of social networks in the pre-announcement day. During the Middle Ages, the Renaissance and the New Epoch, the movements of social groups favored the evolution of social institutions, helped to spread knowledge, to destroy dogmas, concerns, to establish new traditions and norms. In addition, while the scientist does not use the notion of "convergence", the metaphor of the social circles he uses reveals at best the content of this concept.

In the mid-twentieth century, the question of the application of converging technologies was raised more than once in the national and foreign scientific literature. Part of the scientists, particularly G. Meissner, came to the conclusion on the ideological coloration of converging technologies. In this beginning of the 21st century, converging technologies reflect an objective process of transformation of social space and social time.

Converging Technology Implementation Strategies

Being oriented to the needs of social agents in different forms of social interaction, converging technologies represent "a synergistic unity of four main spheres of science and technology: Nanoscience, Biomedicine, Informatics and Cognitivism" [1, p. 2–4]. However, they are not a utility model of innovation development, but they point to the way of society in the 21st century. Converged networks permeate society at the expense of which influence its structuring on individual, state, public and professional levels.

The idea of the convergent dependence of information networks allows to outline the strategy of their formation as a component of social reality. In our opinion, this strategy is based on the support of the difference in potential (disposition) of the management and subordinate coordinates of the social structure. Preserving external integrity and stability, so designed system still remains capable of internal reconstruction. As a result of this, the fact that yesterday was a significant, decisive, dominant, may turn into a subordinate, braking, deforming social reality component. That is, the higher the indicator of social convergence, and since the end of the 20th century, the more valuable social indicators become.

The converging technologies of social structure expansion transform it into a network architect, where sustainability of social relations is the most important parameter. The recognition of the lack of an exclusively administrative influence to achieve socially important goals leads to the fact that the convergence of all social institutions is becoming increasingly evident and supported by artificial intelligence technologies.

Convergence vs divergence

In our opinion, the converging technologies themselves are not able to cover the whole area of modern problems and in the mode of autocorrection of redistribution of social resources and dependence. After all, along with convergent, in the society of the beginning

of the 21st century, there are also diverging processes that take the form of alternative or protest movements. The danger of total unification has become a subject of discussion and dystopia. Among the most notable can be attributed novels E. Zamyatin "We", A. Huxley "Brave new world" and G. Orwell "1984". The authors of these works represented a world without the diversity of colors due to the growth of technological capacity of mankind through artistic images. The dystopia revealed the idea of domination of the convergent system over all aspects of life, including human anthropological characteristics.

Converging technologies are based on a similar principle and pursue a similar goal. Offering diversity, realizing freedom in all its manifestations, their ideology is aimed at abstract, and, accordingly, imaginary person. Convergent networks, such as technical and technological entities, age-specific, gender-specific, financial opportunities of social actors. The subject of their "interest" is statistical social growth in the context of needs, desires, priorities, demand, etc. National researcher M. Onoprienko, in our opinion, exactly similar to the essence of this conflict of development of innovative technologies. As for this, he writes that they "on the one hand, improve the quality of human life and enhance it, on the other - pose a threat to the existence of human body and undermine the idea of man as a unique and unique truth" [7, p. 320]. As a result, a person acts as a constructed object that cannot exist independently.

The tendency to reduce the real freedoms of a person and the possibilities of its self-realization makes it necessary to point to negative aspects of convergence of information networks. The pluralism of the information space is only a myth, an illusion that is financed, coordinated and programmed. By falling into the trap of information diversification, social agents gain a false confidence in their ability to adequately assess, influence and change the course of events, which they have become participants (often, imminently).

Under the misleading feeling of power, the man of the XXI century loses the ability to self-criticism. The strengthening of the informational pressure that accompanies the formation of the network society further removes the person from realization of its potential, replacing critical, rational thinking with stereotyped, formalized information and communication exchange. It is quite clear in this context the paradox, the essence of which is that the more developed (convergent) are social institutions and their networks, the less capable and willing to control them.

Such processes have not only a psychological or cultural basis, but also an economic basis. Every individual in the information society is forced to meet and adhere to standards. In turn, the existence of standards leads to the separation of information social infrastructure. Its centers are transnational corporations, which fill and distribute information flows, and consumers are the end elements.

Dispositif as a form of being virtual

A sufficient number of studies by philosophers, psychologists, sociologists, pedagogues, and political scientists have been devoted to the processes of information-type personality development. Among modern Western researchers in this aspect, the works of J. Agamben deserve attention, in particular the concept of the dispositive proposed by him. Distinguishing dispositive and discourse, the French philosopher points out that the pace of modern life leads to the desubjectivation of social agents, their empty self-replication in the space of information networks [3, p. 26–27]. By producing dispositifs, a person is fascinated by the forms of his own identity,

thus departing from the realization of the potential embedded in him.

Taking this into account, protest social movements and the increase in manifestations of the counterculture become understandable and natural. And if in the 50s and 60s of the 20th century, the reason for the spread of forms of counterculture was the realization of the potential of the introduction of information technologies into all social practices, now the manifestations of counterculture are concentrated around the total emasculation of anthropological and social factors by these technologies as key parameters of cultural and civilizational development.

And this is not another dystopia scenario or the basis for a post-apocalyptic forecast. Studying the social parameters of innovative processes at the beginning of the 21st century using the example of language transformation, scientists note the appearance of a significant number of words that characterize new roles and statuses of individuals [5, p. 81–120]. Changes in gerontological, gender, legal, and political aspects of society's life activities are provoked by the pace of social processes, which are mostly determined by information networks. The appearance in the modern vocabulary of such words as "sandwich generation", "hyperfliers", "cup-holder cuisine", "just-in-time lifestyle" and many other conversion language formations best reveal the essence of transformational social processes.

In our opinion, the subjection of a person to convergent network architecture is especially clearly defined by the concept of "disconnected youths". Those who do not have statuses in virtual social networks and do not use the services of electronic means of communication are designated by it.

What underlies these processes? What makes social subjects avoid direct contact with modern innovative network technologies? We are convinced that the cause of these phenomena, which are anomic and destructive for the information society, is the lack of confidence in the possibility of harmonizing the pace of innovative and socio-cultural development of modern society. At the same time, we are fully in solidarity with the opinion that the preservation of civilization requires the involvement of the latest technological achievements and the development of convergent NBIC technologies. Their basis is three components - the biosphere, the technosphere and the system of social relations, which do not conflict, but complement each other. Fixing such realities and recognizing their objectivity, we will move away from the questions about the autonomy of the individual and his right to self-realization outside the informational space, common in the modern philosophical discourse.

Alienation as a consequence of network convergence

The pace of modern life requires the use of innovative technologies, databases, communication tools, etc. A person transfers a large part of his individual and social life to the network. Friends, work, communication, contacts, photos have become electronic at first, and now virtual. As early as the 70s of the last century, researchers noticed that "accidental communications are the key to social structure, and their frequency is a determinant of social stratification" [2, p. 5]. Today, when leaving the networks, a person feels detached from "reality", aware of his incompleteness, which justifies the interpretation of convergence as a priority direction of development of innovative network technologies. After all, at the beginning of the 21st century, not only financial and economic, but also scientific, educational, political, and cultural processes are becoming impossible outside

of convergent global information networks. The effectiveness of the broadcast of disparate social information directly depends on the ability of the network to differentiate it and further synthesize it. Due to this, the latter become an element of social existence.

Going beyond the socio-cultural potential of the network infrastructure, we can foresee the emergence of anthropomorphic networks that will "personify" global consciousness. Such an assumption sounds like science fiction, but for several years now, experts at the European Council for Nuclear Research (CERN) have been using the resources of both individual computers and separate networks to carry out extremely complex calculations of the Large Hadron Collider. Even the processed data make up such a significant array of information that it cannot be recorded in an operational (up-to-date) form on any standard media, and therefore exists only in a virtual network form. When conducting theoretical calculations, in fact, the researcher is forced to submit requests to the network, clearly indicating what exactly interests him. At the same time, the full amount of data is inaccessible to the human mind.

The concept of historicity of the subject of knowledge does not remove this conflict either. When studying gravity, a black body or the evolution of stars, different generations of scientists dealt with the same object. Even in the space of post-non-classical science, which revealed objects vulnerable to external intervention, as well as objects with short-lived, sporadic properties, theoretical calculations and models provided historicity to the cognitive process. In the situation described above, the mentioned approaches do not work, because the object of cognitive interest becomes the network information (not the object, not its model or image), which changes with each fact or request added to it.

We will leave the analysis of the socio-cultural consequences of the introduction of such innovative technologies outside the scope of this study, especially since a significant amount of popular science and futurological literature is devoted to this problem, and dozens of films have been filmed. The latter clearly demonstrate various variants of events after the onset of the so-called technological singularity is a moment in history after which a person will not be able to evaluate, comprehend and independently maintain the pace of scientific and technological progress. It is possible that this direction of social development is natural and inevitable, and our concern is only a form of fear of change. After all, society, like any self-organized system, strives to achieve a stable state, and will by all means avoid the destruction of established connections and relationships.

The lack of certainty regarding this issue, according to some researchers, will have devastating, destructive consequences for society and culture. When studying the phenomenon of human alienation in the discourse of information and network culture, it makes sense to raise the question of the priority value of personal identity and individuality. Overcoming alienation is the understanding, awareness and projecting of historical human and humanity.

At present, for the first time, humanity is faced with a challenge to their intellect, their ability to create, control, and learn. In the face of global problems, is society ready to transfer part of the management to a virtual network? This is the question that will confront us in the coming decades.

Conclusions

As follows from the conducted research, without understanding and generalizing the future-oriented potential of global information networks in general and

converging technologies in particular. The civilizational progress of humanity in the 21st century risks losing direction and orientations. Over time, its trajectory will turn into a movement through a labyrinth, in which each subsequent step will not be correlated with the previous and subsequent states of society. Its social dynamics will finally be deprived of a reference point for the socio-cultural perspective. Such scenarios of social development have an objective basis. After all, at the turn of the 20th - 21st centuries, information networks are turning into means of projecting social reality, due to which the course of social processes becomes difficult not only for control, but also for understanding at the level of mass consciousness.

References

1. Converging Technologies for Improving Human Performance Nanotechnology, Biotechnology, Information technology and Cognitive science. — Dordrecht: Kluwer Academic Publishers, 2003. — 482 p.
2. Pool I., Kochen M. Contacts and Influence // Social Networks. — 1978/1979. — P. 5–51.
3. Ahamben Dzh. Chto sovremenno? — K.: Dukh i Litera, 2012. — 78 s.
4. Bevzenko L.D. Sotsyalnaia samoorhanyzatsyia. Synerhetycheskaia paradyhma: vozmozhnosty sotsyalnыkh ynterpretatsyi. — K., 2002. — 437 s.
5. Zatsnyi Yu. A. Suchasnyi anhlomovnyi svit i zbahachennia slovnykovoho skladu. — Lviv: PAIS, 2007. — 228 s.
6. Zymmel H. Yzbrannoe. — M.: Yuryst, 1996. — T. 2. — 607 s.
7. Onopriienko M.V. Dorozhnia karta vysokykh tekhnolohii. Istoryko-naukovi ta filosofsko-naukoznavchi aspekty mehatekhnolohii znannievoho suspilstva. — K.: Inform.-analit. ahentsov, 2011. — 359 s.

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