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ANTHROPOLOGICAL ASPECT OF VIRTUAL CONSTRUCTION

Formulation of the problem. At the beginning of the third millennium, the new way of life formed by the technosphere not only changed the human environment radically, but also expanded it by means of virtual reality.

At the dawn of our existence, by "virtual reality" we meant altered states of consciousness or identified this concept with the potential existence of objects. With the advent of computer technology, the definition of "artificial reality" created using sign systems has become associatively closer [11, p. 382].

With the development of information and communication technologies, simple definition has quickly succumbed to intense trivialization, become an extended metaphor of mass postmodern culture with vague and amorphous semantic characteristics [12, p. 467].

The phenomenon itself, meanwhile, has transformed and opened new horizons for research. The paradigm of philosophical issues related to virtual reality has expanded significantly due to the study of "Bayesian" and social virtual reality, the possibility of re-embodiment, the fact of merging human-controlled avatars and virtual agents, the study of virtual dissolution of the ego, the existence of controlled virtuality continuity, fusion of virtual reality and artificial intelligence, and consideration of the most conscious experience in periods of interaction with virtual constructs, etc. [8].

The situation is complicated by the fact that the sensory physical world of specific objects is inferior, in terms of accessibility, to virtual reality, because we can dominate over it at least partially [9, p. 194].

In view of the above, it can be stated that virtual reality, mediated by computer technology, is rapidly transforming and expanding its sphere of influence at the present stage of development, and therefore requires a substantial understanding and comprehension of its basics.

The basic element of virtual reality is a character. We can identify this unit as an object open to sensory perception, which performs the function of substitution and is the result of symbiosed objective and subjective characteristics of the replaced object or phenomenon.

Characters in terms of characters systems do not exist autonomously, they form combinations, i.e., virtual constructs.

A virtual construct is a consciously created object of virtual reality, which is a computer-actualized combination of characters that operate according to the rules of logic within the limits regulated by a certain programming language.

Today we can say that the creation of virtual constructs is a natural process of technology development. Primitive techniques designed under the observations over natural objects and phenomena have gradually become more complex with the development of mankind, and today we can observe a simplified reflection of the world.

The tendency to copy objective reality when creating virtual constructs indicates human weakness, because the anthropic principle is only one of the factors that simulates the world and, given the mostly negative impact of human life on the complex and self-regulating system of nature, the universe can easily neglect this element. Therefore, humanity asserts itself and creates a controlled, safe and plastic environment.

In fact, virtual reality is outside the system of "Nature – Human" relationships, because no natural conditions directly affect its existence. The plane for constructs embodiment is more the system "Human – Human", because both the producer and user of this product is humanity.

The anthropological opposition of virtual reality and its prototype, against the background of the rapid technological development and the expanded areas of constructs influence, encourages us to study these structures fundamentally and find the ways to improve them.

The theoretical background. The framework of the research is a critical understanding and synthesis of classical ontological concepts represented in the works of Aristotle, J. Baudrillard, P. Florensky and M. Heidegger. The main philosophical studies of the virtual reality phenomenon belong to A. Artaud, R. Burroughs, J. Gibson, N. Nosov, G. Reinhold, R. Cooper, J. Suler, M. Heim, F. Hamit, S. Khoruzhyi and others. Modern transformations of the phenomenon are presented in the works of J. Bailenson, F. Bray, F. Biokko, T. Metzinger, O. Ollihano, R. Earnshaw, etc. Despite the fruitful work of researchers, the process of virtual design is still by default identified with the creation of real objects, which indicates a weak level of the virtual

ontology development. In the context of the modern society transformations caused by the growing mankind consumer needs, the virtual reality phenomenon requires a theoretical addition to the system and rethinking it from an anthropological standpoint.

The aim of this paper. The purpose of the article is **to outline the anthropological aspect of constructing virtual reality**, which involves the consistent solution of the following tasks: a) study of the algorithm for constructing real objects as a prototype of virtual constructs; b) ontological distinction of real and virtual structures; c) creating an algorithm for virtual construction; d) study of differences in the laws of existence of real objects and virtual constructs; e) search for prospects for the development of virtual reality; f) establishing the role of man in the process of expanding space with the help of computer technology.

Presentation of the main research material
Ontological regularities for material objects and virtual constructs creation

In the 21st century, conceptual virtuality acquires a new semantic load. Nowadays, it is associatively interpreted not as something imaginary or potential, but as a space constructed by means of computer technologies and character systems that function objectively.

In order to approach thoroughly the philosophical and anthropological analysis of virtual construction, it is necessary to investigate the ontological laws for creation of a material object as a prototype of a virtual construct.

The process of objects creation is easiest to be considered through causality. Since the time of Aristotle's Metaphysics [1], 4 reasons have been considered as basic: 1) causa materialis – material; 2) causa formalis – form; 3) causa finalis – goal; 4) causa effïciens – master.

Matter contains the potential for the form. The third reason, the goal, is the purpose of the object being created. Matter, form and goal are equally "guilty" of the appearance of a thing. However, the greatest blame lies with the person who constructs the object by their activity.

M. Heidegger in his article "Questions about technology", considering the Aristotle's causality, emphasized: "In fact, setting goals, creating and using tools to achieve them is human activity" [5]. In the philosopher's understanding, things exist potentially and only through human mediation and "posture" (Gestell) they grow out of secrecy (non-existence), and become such that "are-available" [5, 231-238 pp.].

Similarly, the processes of creation and their characteristic anthropocentrism are described by P. Florenskiy, who calls the source of construction processes as the subconscious, which, according to the philosopher, is engaged in the production of ob-jects, reproducing the patterns of body organs functioning [3, pp. 402-421].

So, based on the above, we can conclude that it is the potential stimulated by human needs that actualizes the thing in the material space.

Each material particle, which is the basis of a material object, is characterized by inexhaustibility, spatio-temporal dependence, motion, reflection, preservation and objectivity. However, at the same time, each elementary particle can exist only in 2 states: 1) at rest (field); 2) in motion (substance).

The complexity of this substrate also lies in its dynamic adaptation to the conditions of existence, which, in turn, provokes the regular transformation of objects. The starting point of the dynamics vector is the movement start from the thing-symbol (archaic and the Middle Ages). The next stage – a thing-form – becomes available to the senses (the end of the Middle Ages – the Renaissance). Then there was the transformation of the thing-function (the new and contemporary times) into the thing-fiction (postmodern) [6, p. 343].

In N. Reznik' papers, we find the concept of dividing a thing into 3 incarnations: 1) the code of consumption (substitution of existence by a character that partially levels the content); 2) a thing as an embodiment of the past (construction with the help of historical references), 3) a thing that functions as a metaphor for another one (not for use, but for information) [10]. All the division elements outline the change in the functional field of the thing, which indicates the elimination of the essential object foundations.

Based on the above concepts, we can derive an algorithm for constructing a real object.

The starting point of construction is the beginning of the human life cycle. A certain causal relationship that is mediated by nature and society in the process of ontogenesis can form a human – creator (causa effïciens).

This subject survives, learns and gains experience containing the potential for the creative process. If there is a catalyst, i.e., a need, there appears a goal (causa finalis).

Trying to satisfy the need, the master constructs a theoretical model – a form (causa formalis), which reflects the personal abilities of the author, his skills and personal experience.

It is the material (causa materialis) that closes the theoretical level of construction and opens the practice of things construction. The thing is actualized in matter.

The result of the master's efforts is a prototype of the thing. A person's relationship with an object created by them can be identified as an internal process, a closed system.

However, as the human is a social being, and since the completed work can serve to meet their higher

and lower needs, the newly created object becomes the public property. Informing the society about the existence of a new thing (especially if it is characterized by a high coefficient of usefulness) causes a desire to appropriate it. To meet consumer demand, the closed system opens and introduces other persons into its circuit. The result of continued production is not the same thing, because each new unit was preceded by a different causal relationship.

If the thing meets the expectations of consumers, demand increases, and this stimulates the emergence of new copies. The created items, in the course of time, lose innovation and become a part of the flow of routine things, giving way to new ones. Embodied in perishable matter, they are destroyed. They have only one chance to continue their existence, i.e., to become a symbol.

This is how their ideal image (form) is fixed in the consciousness and memory of the mankind.

The existential cycle for the material object ends at this stage.

As a result, it can be stated that all elements of the design process are characterized by anthropocentric features, because the appearance of a thing is preceded by the existence of personality, a goal is an expression of their primary or secondary need, a form is the optimal image of a thing. The cycle of the object existence depends on the application method and human plans. Even the process of symbolization takes place with the help of the collective mind.

The process of constructing virtual constructs largely follows the established ontological scenario, but there are also differences.

Exploring hyperreality (simulation of reality), J. Baudrillard remarked: "The essence of the visual image is an abstraction from the three-dimensional world and the transition to a two-dimensional world" [2], i.e., all virtual constructs are a simplified reflection of the objective reality. The material for virtual design mediated by computer technology is a set of characters (numbers, letters, symbols, dashes, etc.). The construct not embodied in the matter continues to develop and, thus, avoids the final stage of the existential cycle – materialization. Under such circumstances, a human is able to immortalize the real thing with the help of characters systems without the mediation of the collective mind and its symbolism.

The availability of a virtual construct can lead to an uncontrolled reproducing. However, it should be noted that in cyberspace, characters that are the matter of virtual constructs are unlimited in their existence. They are not characterized by physical properties, they function beyond the space and time, therefore, they are not subject to destruction. Even after losing their relevance, these objects continue to exist as passive particles of the general flow. In the real world, the principle of equilibrium applies: the new replaces the old – and the old disappears.

Such harmony ensures a moderate existence. In virtual reality, the old and the new mix to create a chaos that is constantly expanding and capturing more and more public attention.

Anthropological mediation of virtual construction processes

The reason for this situation is the growing level of consumer needs. The way of life of previous generations is radically different from the today realities. In the past, manual labor was predominant, providing for lower needs [7] in unfavorable life circumstances (wars, epidemics, famine, unstable political and economic situations, natural disasters, etc.). Under such conditions, spiritual development was an important but secondary phenomenon.

In modern realities, for the vast majority of the world's population, the ability to meet their lower-level needs is no longer an achievement, but a routine (Harari, 2018). Therefore, non-material needs naturally come to the fore. The dimensions of this class of needs are vague, abstract and, to a greater extent, personalized. Lack of clear understanding provokes the replacement of a qualitative unit by a quantitative non-qualitative set.

Material things are more understandable to the society than speculative voids, so, against the background of the current level of the noosphere development and available opportunities, there is a request to increase the amount of the matter. The passive field, according to the mankind's plan, must be replaced by the matter, because emptiness is not a mastered space for human realization. Since the reality has physical limitations, and the limits set by the matter do not satisfy human desires, a plastic virtual reality open to manipulation is projected, which acts as a concentrate, a flattened image of the world.

The existence of such a plane allows a person to fill the empty space of the field and thus shift the balance to the side of the matter, but this filling will be poor. According to the logical law of mutual transition of quantitative and qualitative changes, the quantity in progression will necessarily turn into the quality.

So far, in the field of virtual reality, we are witnessing the accumulation of monotonous, standardized constructs, because all of them are united by identical material, i.e., a character. Although a character is a material and sensory substrate, it only represents objects. Imitation of the realized need is not able to satisfy the need in full.

Virtual objects will not be able to satisfy physiological needs in full, as they are necessary conditions for human existence, but intangible needs are more abstract and individual. Today we often find examples of replacing components of social, prestigious or spiritual categories with easily accessible virtual counterparts. This trend is gradually depreciating real gains.

Virtual reality is a useful tool when working with information and an almost integral part of modern interpersonal communication, but global virtual design affects the quality of life. Since this space is an artificially constructed society without the direct involvement of nature, the function of information flows regulation under the synergetic approach must be formed by a human.

Conclusions and prospects of research. As the analysis shows, the tendency to duplicate the basic laws for creation of material reality constructs by the virtual one is not a guarantee of ontological identity. In contrast to the subject field of the reality, each virtual construct and each stage of its creation is anthropologically determined.

The reason for the creation of virtual constructs is to increase the demand for information in modern society and the desire for self-realization by seizing an absolute power over the virtual space, which is open to manipulation.

As a result, the substitution of a matter for a character in a computer-constructed reality not only stops destructive processes, but also eliminates the self-regulation characteristic of the natural environment. All this leads to virtual expansion through the accumulation of information flows, and thus to the strengthening of human interdependence and virtual reality.

The way to solve this problem is to imitate natural regulation, which is implemented in science through the synergetic approach.

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Анотація

Богданець І. М. **Антропологічний аспект віртуального конструювання.** – Стаття.

Дослідження спрямовано на пошуки алгоритму віртуального конструювання з урахуванням антропологічного параметра. Об'єкти віртуальної реальності досі по замовчуванню ототожнюють з реальними об'єктами не зважаючи на різні матерії втілення та відмінності у закономірностях їх існування. Стрімкий розвиток комп'ютерних технологій та підвищення значення віртуальної реальності для людства обумовлюють логічну необхідність вивчення віртуальних конструктів, особливо антропологічного контексту їх існування, адже заміна матерії сконструйованим людиною знаком захищає об'єкти віртуальної реальності від руйнування, що зрештою призводить до віртуальної експансії шляхом нагромадження інформаційних потоків, а отже до посилення залежності людини від віртуальної реальності. Як засвідчує проведений аналіз, тенденція до дублювання основних закономірностей творення конструктів матеріальної реальності віртуальною не є гарантією онтологічної ідентичності, адже на відміну від предметного поля реальності, кожен віртуальний конструкт та кожен етап його створення є антропологічно обумовленим. У контексті трансформацій сучасного суспільства, спричинених зростанням споживчих потреб людства, феномен віртуальної реальності вимагає теоретичного доповнення системи та переосмислення її з антропологічних позицій. На тлі підвищення інформаційного попиту та прагнення до самореалізації шляхом захоплення абсолютної влади над відкритим для маніпуляції кіберпростором виникає потреба у створенні самодостатнього та онтологічно незалежного образу віртуальної реальності, який дозволить контролювати вплив здійснюваний на людину шляхом впорядкування сутнісних структур віртуальної реальності. У перспективі, необхідною умовою розвитку віртуального конструювання є наслідування природної регуляції, яка реалізується у науці за допомогою синергетичного підходу.

Ключові слова: віртуальна реальність, антропологічний аспект, віртуальний конструкт, віртуальна експансія, віртуальна онтологія.

Summary

Bohdanets I. M. **Anthropological aspect of virtual construction.** – Article.

The research is aimed at searching for an algorithm of virtual construction taking into account the anthropological parameter. Virtual reality objects are still identified by default with real objects, despite the different matters of embodiment and dissimilarity in the laws of their existence. The rapid development of computer technology and the increasing importance of virtual reality for humanity necessitate the study of virtual constructs, especially the anthropological context of their existence, because the replacement of matter by man-made sign protects virtual reality from destruction, which ultimately leads to virtual expansion through the accumulated information flows, and thus to increased human dependence on virtual reality. According to the analysis, the tendency to duplicate the basic laws of creation of constructs of material reality virtual is not a guarantee of ontological identity, because unlike the subject field of reality, each virtual construct and each stage of its creation is anthropologically determined. In the context of the transformations of modern society caused by the growing consumer needs of mankind, the phenomenon of virtual reality requires a theoretical addition to the system and rethinking it from an anthropological standpoint. Against the background of the growing demand for information in modern society and the desire for self-realization by seizing absolute power over cyberspace open to manipulation, there is a need to create a self-sufficient and ontologically independent image of virtual reality, which will control to control the impact on humans by streamlining the essential structures of virtual reality. In the long run, a necessary condition for the development of virtual design is the imitation of natural regulation, which is implemented in science through a synergetic approach.

Key words: virtual reality, anthropological aspect, virtual construct, virtual expansion, virtual ontology.