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SPIRITUAL VIRTUUM: THE INTERACTION OF THE FINITE AND THE INFINITE

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Abstract. *The virtuum is shown as one of the dimensions of society. The conceptualization of the phenomenon of the spiritual virtuum in the context of the interaction of the virtuum infinite in being and finite in the digital reality of the cyber-techno-sphere is the goal of this study. The phenomenon of the virtuum is considered within the framework of socio-philosophical, ontological, and transcendental approaches. Each virtual object is finite and discontinuous. In the spiritual virtuum the boundary is conditional and imaginary. The position is summarized that a computer designer who is able to adapt to various life situations, in order to manage virtual reality. The spiritual virtuum or the peculiar life of the Digital Spirit can be understood as a property of the soul, consisting in the predominance of spiritual, moral, and intellectual interests over material ones.*

Keywords: spiritual virtuum, finite, infinite, cyber-techno-sphere, computer virtual reality.

Introduction

In our previous studies, we presented the virtuum as one of the many dimensions of society, as a spiritual sphere that is formed at the intersection of ideas, imagination, fantasies, and dreams, and then materializes in its various manifestations in scientific inventions, artifacts of culture, history, art, things. At the same time, computer technologies should serve as amplifiers of creative possibilities and manage technical resources for the search for truth, and innovative scientific solutions. However, cyberspace and the Internet only more ostentatiously demonstrate that not art, but "artificiality" is becoming a key maxim in modern life.

However, "artificiality" is unacceptable in art, since art shows the beauty of natural forms, and fixes them in eternity, enhances their spiritual context, and deepens the value meaning. The Internet plays a key role in politics and was originally intended to be used as a "weapon", which in principle excludes the freedom of creativity. Political goals are always finite, while creativity is infinite.

Virtual reality in the social virtuum also plays a narrowly applied role, since it is a copy of constant reality. Sometimes it is a play of the imagination, a constructive, creative illusion (animated images of inconceivable characters created in cinema and literature), and sometimes it is a fake, a simulation, an imaginary plausibility (conscious distortion of the truth). As much as art and creativity are eternal, so computer virtual reality is finite.

Thus, the virtuum, as one of the dimensions of society, is a fixer of various moments of materialization and embodiment of ideas (in science and technology, literature, music, architecture, cinema, and computer space), in comparison with which, computer virtual reality is almost completely devoid of spirituality.

The spiritual virtuum is connected with the inner world of a person, its intellectual activity, feelings, and thoughts. Mythology, religion, philosophy, history, science, and art are the supporting structures of the spiritual virtuum, in the present, transforming into a many-sided virtual world. The combination of cybernetics, technology, and creativity will only enrich this world, provided there is a spiritual principle preached by these constructs. However, modern cybernetics often deviates

from following the principles of spirituality, which limits its vision of the role and purpose of Artificial Intelligence.

The spiritual world as such tends to infinity to a greater extent than nature, since we are not able to determine the limits of the Spirit. In material nature, however, within the limits of "conditional infinity", we continuously limit ourselves to other infinite limits – the duration of biological life, earthly conditions of existence, being in familiar physics and its laws. The spiritual principle is a universal and eternal imperative that determines the vectors of the development of society, and provides freedom of choice, but does not limit it.

The virtual world also reflects various manifestations of creative freedom, but it is the manifestations of creative energy that are synchronized with moral aspirations and bring the effect of infinity into its digital virtuum-sphere.

Spiritual closeness unites people most strongly in the virtual world. This is what often attracts individuals in the Internet community. However, this is precisely what they are unable to obtain, since virtual reality simulates the effect of communication and cannot exist outside of its limits. Such narrowness makes it final.

The aim and tasks

The conceptualization of the phenomenon of the spiritual virtuum in the context of the interaction of the virtuum infinite in being and finite in the digital reality of the cyber-techno-sphere is the goal of this study.

Research methods

Based on the goal, we propose to consider the phenomenon of the virtuum within the framework of socio-philosophical, ontological, and transcendental approaches.

In the socio-philosophical context, the spiritual virtuum represents itself as a high-tech intellectual measure in the continuum of the currently existing anthropo-techno-sphere. In our opinion, the new model of society as a social virtuum implies the expansion of human knowledge and communication; improvement of human health and physical ability; increase in the effectiveness of collective activity; modernization of instruments ensuring national security; the union of science and education (Kharchenko 2020, 45).

The ontological approach actualizes the connection of the spiritual virtuum with the activity of the intellect,

consciousness, logic, and morality. It is not reducible only to religion, since religion is one of the ways of the existence of spiritual life, although religious institutions also try to apply to the processes of virtualization of society. The spiritual virtuum, at first glance, is more abstract, speculative, mental, academic, theoretical, metaphysical, transcendental, non-objective, immaterial, incorporeal, incorporeal, platonic, and spiritual dimension. However, at the same time, all these abstractions can be displayed technically in digital images that are, conditionally materialized; the main thing is that there are skilled artists, programmers and computer designers.

The quality of the spiritual virtuum depends on the presence of moral principles in society, as well as their value-semantic load. The modern cyber-techno-sphere, in principle, ignores the significance of the deep spiritual imperatives. V. Budanov rightly argues that in a technogenic civilization the technology and the techno-sphere are hypertrophied, they successfully reproduce and enhance all the abilities of the organic human body, and today we are witnessing a new level of hybridization of these technologies (human-machine systems) and even attempts to reproduce higher intellectual functions of human (artificial intelligence). In this regard, there are risks of degradation not only of the human physical body, which has been happening for a long time, but also of dehumanization, degradation of high creative and spiritual functions of a person. Scenarios of dehumanization and the advent of an era of artificial intelligence are possible, and a harmonious co-evolution of the techno-sphere and human is also possible, in which both types of technologies will develop. A separate most acute problem remains the question of the co-evolution of mankind, including both the techno-sphere and nature (Budanov 2014, 35). That is, it can be argued that virtual reality, as an attribute of a virtual society, does not strive for a spiritualized person in the cyber-techno-sphere, where its creative constructive beginning is present, and where it is presented as a person. Otherwise, the depth of a creative personality could be infinitely tangible as an inexhaustible set of alternative virtual images of reality, which would only improve the "constant reality" or actual being. On the contrary, the virtuum exaggerates the bodily, material, utilitarian human.

V. Budanov built temporal scales for the projection of the development of the world on human physicality. He considers a person as a multi-temporal being, living simultaneously in a multitude of ontological times, hierarchical levels, decreasing along the characteristic scale of processes: as a "bio-cosmic body", where the cosmological anthropic principle and helio-geo-biological anthropology speak of the conjugation of the co-evolution of human and our Universe, the surrounding nature; as a "bio-social body", where the zoo-psychological foundations of human nature are manifested, in the vast majority of forms of behavioral culture and social self-organization; as a "historical body", where the foundations of human identity with a species, ethnos, clan, as well as collective archetypes of the unconscious are laid; as "the body of culture, tradition"; as "the body of activity, practice, knowledge, skills"; as a "body of action" or habitus, styles, skills, temperament; as a "body of consciousness-

reaction" or psycho-kinetics, the limits of control of reflection; as "a-temporal body inherent in eternity" or altered states of consciousness, affects (Budanov 2014, 44). Consequently, even in its corporeality basis, a person is presented as an infinite multiverse with a complex transcendental superstructure.

The transcendental approach provides for the understanding, description, and fixation of the presence of the spiritual principle in all dimensions of society, including the virtuum. Virtuum as a special technogenic human community is also in its own way filled with the Spirit in the meaning - conditionally non-material, non-corporeal. In computer virtual reality, objects are also non-material and non-corporeal in the generally accepted sense, but at the same time, they are virtually corporeal and virtually existential.

Research results

Consequently, the spiritual virtuum is one of the most relevant and controversial phenomena analyzed by modern philosophy, cybernetics, and virtualistics. Human, as an integral element of the infinite space of the Universe and finite manifestations in this space, forms an additional environment – the virtuum, which is able to localize and virtualize many of its ideas in a narrow computer sphere, that is, to transform "possible" and "real" into "impossible" and "unreal", and vice versa.

The Finite and the Infinite in the virtuum manifest themselves in a special way, unlike in the constant reality. In habitual existence, the "Bodily Human" is a finite being, while the "Spiritual Human", on the contrary, is an infinite being. And we cannot fix its "pure being" when it is outside its body, which remains an unresolved dilemma for science, but not for philosophy and religion.

However, in the virtuum a person can be many times infinite as a digital projection. Moreover, its projections can be saved, copied, transferred, changed (one can model appearance, body configuration, avatar in a 3D image or one can create a copy of an actor who died and did not have time to finish his role).

The Finite in the spiritual virtuum is the last limit to reach the goal, the final cause. The Finite characterizes any specific object (thing, process, phenomenon, state, property) limited in terms of technical capabilities.

Each virtual object is finite and discontinuous by shutting down the computer, finishing reading a book, or watching a movie. The definiteness of the Finite is given by its boundary. It can be spatial, temporal, quantitative and qualitative. In the spiritual virtuum, the boundary is conditional, imaginary.

I. Kurilovich confirms that the idea of the end does not limit the set of events, stories, but implies their totality, integrity, completeness, the cessation of becoming in history, and also fixes the impossible where something else can potentially be added to this event (Kurilovich 2019, 43). The boundary separates the final object from others and connects it with them; therefore there is a universal connection of phenomena and processes in a constant reality. The Finite, on the one hand, has a relatively independent, isolated existence, and on the other hand, it is conditioned by something else and depends on it. In the existence of the virtuum within the computer virtual reality, on the contrary, the final

objects may not be interconnected at all, since they exist within various fictional computer worlds.

In constant reality, the Finite can only be understood as the unity of its own being with non-existence, as their mutual transition into each other, as something changing, transient, and non-existence cannot be fixed as material non-existence. In the spiritual virtuum one can construct any image of non-existence and visualize it.

L. Drotianko warns that the development and constant expansion of the boundaries of communication in social information networks give many advantages to the participants of various Internet societies. However, researchers of these communications also warn about existing and possible future threats that such communications contain. One of the threats is the self-isolation of people who spend their time mainly in the Internet space, replacing direct human-to-human communication with virtual communication with virtual interlocutors. Going out into the real world, facing real and not virtual problems, such participants of social information networks experience confusion and are not able to adequately respond to life's challenges. Such threats are inherent not to one particular society, but to most countries with a more or less developed Internet network, where access to Internet communications is quite free (Drotianko 2019, 18).

The Finite is connected with the definition of constant reality as discrete. In the spiritual virtuum, it is not always possible to find something in common between virtual objects. The boundary of a virtual object is always represented as its total limitation. In a constant reality, such limitations are relative.

The Finite is defined as a vanishing moment in the process of unplugging the computer from power, not as a transient state of matter in perpetual change. In computer virtual reality, the world remains unchanged. It only changes when the program is upgraded. Changes in the cyber-techno-sphere are not associated with the removal of boundaries, limits, differences between things, and, consequently, the removal of discreteness, but with the emergence of new technical capabilities within existing limits.

In computer virtual reality, each Finite does not go beyond its limits, firstly, because it does not correspond, does not interact with being (constant reality) that lies outside its boundaries, and secondly, because it does not turn into another Finite some time later.

Each Finite exists within its own programmed narrowness. In this permanent closed artificial world lies the separate, narrow nature of any Finite. That is, in the cyber-techno-sphere, the Finite is something extremely definite, immovable, and the process of development occurs only depending on the external will of a computer engineer. That is why it is precisely Finite and not Infinite.

From the point of view of transcendental logic, the spiritual virtuum goes beyond the cyber-techno-sphere, the outer boundaries of the existence of spiritual things – ideas, fantasies, which are either embodied in real objects, or in the cyber-techno-sphere are transformed into virtual objects, computer simulacra. Its conditional beginning and end in time and space are separated only by a conditional internal boundary. That is, a

qualitatively defined measure, which is immanent in the contradictions of this measure, is impossible. We have already noted that the spiritual virtuum has always existed; it is not limited only by the technical characteristics of the cyber-techno-sphere. Therefore, in the spiritual virtuum, the production of "spiritual things" is only conditionally limited (for example, by fatigue, unbearable conditions, death).

The Infinite in the spiritual virtuum consists of an infinite number of conditionally finite things (ideas, fantasies, plans). The very nature of the Finite presupposes the possibility of going beyond its borders, but in real being the Finite does not exist without the Infinite. In the cyber-techno-sphere, the Finite just exists without the Infinite, so there is a feeling of "crowding" in computer virtual worlds.

The presence in the real world of finite things (for example, stars, galaxies, planets, plants, animals) and processes testifies to the infinity of the material Universe, therefore any of its final characteristics, parameters, quantities included in the theory of fundamental science cannot have absolute values. Therefore, the theories and models of relativistic cosmology describe only some characteristics of the finite part of the infinite Universe. In computer virtual reality, alternative multiverses can exist, and their variations are endless, but they are ultimately finite, because they do not reflect real experience, real being, therefore, they are terribly fictitious.

In turn, the Infinite in the spiritual virtuum is almost absolute, since it does not demonstrate the diversity of phenomena and objects of the material world, forms and trends of its development, but is a representation of the Spirit and Fiction as approximations to the ideal being. The spiritual in the virtuum can only partially materialize in the objectively existing being of society (in things, inventions, attributes of art, technology) or in the cyber-techno-sphere in virtual objects (fantastic worlds and characters).

In computer virtual reality, partly characteristics of ideal Being take place: separation from matter; reduction to the product of mental, creative, inventive, fantasy activity; transformation as an attribute of a certain "virtual being", "being of Artificial Intelligence"; approaching the middle real-imaginary state – the virtuum.

Yu. Danilenko confirms this idea by the fact that in the true Infinite there are two moments: the Infinite and the Finite are becoming. Thus the Finite has disappeared into the Infinite. Then everything turned upside down: the Infinite became affirmative, thanks to the negation that correlates with itself, and the Finite became the negation of the Infinite. Since this is a negation, it follows that the Finite is the determinateness of the truly Infinite. The Finite, which is only a moment of the true Infinite, is called the ideal, and the real is the truly Infinite itself. It is the Real in a higher sense than the real obtained by the first abstract negation. The Real is opposed to the real, which is finite existence. Concrete individual finite things that have come from a single substance are ideal as moments of the truly Infinite. And the substance itself or matter, as the truly Infinite, is the Real. The Finite disappears into the Infinite, that is, there is no Finite, but there is only truly Infinite or

Being-For-Itself, since there is no other (Danilenko 2016, 250). The infinite, as having no end or unthinkable, can be represented in the spiritual virtuum as an out-space-time continuum, since any boundary is super-conditional, taking into account the influence of the irrational and the unconscious on creativity and the production of ideas. Imagination in the virtual world conditionally removes consciousness, logic, and reason as tools of cognition and turns the virtuum into an endless imagination world. The imaginary generates a stream of impressions where the "transfinite" (absolute infinite totality), "infinite" (having no end), "indefinite" (unlimited) and "incommensurable" reign.

Discussion

Consequently, the Finite and the Infinite in the spiritual virtuum as a kind of middle continuum manifest themselves as real-imaginary constructions produced by Human. The discussion about the key determinants of the spiritual virtuum requires an even more abstract logical technique, since the question of the ontological nature of the virtuum as the being of society is connected not only with the definition of the role of God as the Creator of the Universe, but also of Human as the creator of new additional meanings of this Universe and new living conditions.

The key determinants of the spiritual virtuum, in our opinion, are ideas, fantasies, dreams, which are priceless in a creative search.

Fantasies live a fuller life in the spiritual virtuum because, as non-existent, they can literally be made to exist. Fantasizing as a pure improvisation of any non-existent event or situation depends on the desire and possibilities of the individual or collective imagination. Fantasies are the forerunner in scientific and artistic creativity, and without fantasies, any scientific theory is untenable. The possibilities of intellectual activity are endless precisely thanks to fantasy. Otherwise, they are finite.

S. Konyaev noted that it was the fantasy of the creators of quantum mechanics, primarily Schrödinger that made it possible to move from a "tactile" model of describing reality to a probabilistic one or to the possibility of a particle appearing at one or another point in the universe. This "otherness", dissimilarity of the quantum mechanical description still causes controversy regarding the interpretations of the quantum mechanical theory (Konyaev 2018, 87). In cybernetics and mathematics, the terms "limited", "definite", "finite" are used. Any definition (or limitation) leads to the finite, while in mathematics the limited does not always mean the finite. There are cases when a numerical sequence appears as finite in one respect (that is, it has a limit on the size of its members), and in another acts as infinite (in relation to the number of these members).

The same kind of infinity is characteristic of any theory. Always explicitly or implicitly, there are parameters in it, the limitation of which is associated with taking into account other parameters of the phenomenon that are not included in the theory. Here imagination and fantasy play a key role. Without them, any theory cannot, in certain respects, be extrapolated to infinity. New ideas and designs provide, in turn, the

removal of the previous extrapolation and provide the next, more concrete theory, introducing new final parameters.

S. Konyaev emphasizes that modern physics shows absolutely amazing properties of matter at the micro level. For example, the effect of elementary particle tunneling, which indicates that the boundaries of the human body, taking into account the physics of the microcosm, can be infinitely elongated, allowing a person to be present over a fairly long distance with the help of quantum effects from the boundaries of the body, visible in the usual spectral range. In addition, quantum mechanics, as already noted, also offers a many-world hypothesis of the surrounding world (Konyaev 2018, 89). A one-sided mathematical understanding of the Finite, expressing it only as a magnitude or proportion, devoid of any contradictions, leads to insoluble paradoxes that fill modern quantum physics. Without imagination and fantasy, it is impossible to express a specific quantum object, and even more so to determine its boundaries through formal mathematical quantities, relations. The finiteness of mathematical models is associated with the introduction of a finite number of finite parameters into the mathematical theory, that is, they assume the Finite as a starting point, and therefore the Finite inevitably acts as a result of the formal mathematical design of both mathematical models and computer programs in computer virtual reality.

S. Konyaev also admitted the idea that in modern concepts of physical reality there is the possibility of registering events that are completely unthinkable from the point of view of classical physics. The quantum theory turns out to be non-local, that is, despite the existence of the principle of relativity and the finiteness of the interaction rate, the process of reduction of the wave function occurs instantly. Moreover, the non-locality of the wave function refers not only to its spatial parameters, to which everyone is already accustomed (particles turn out to be correlated, regardless of the distance between them), but also to time intervals (it turns out that there are experiments that demonstrate the impact on the system from the future to past). Reflections on the essence of human fantasy show that consideration of this issue will probably require the formalization of the concept of the boundary of a biological system, which includes both a computer metaphor that takes into account both the material and program levels of human physicality (Konyaev 2018, 97). Consequently, the impossibility of taking into account the finite size of a micro-particle in modern quantum physics leads to infinite values of its energy. By introducing the finite parameter "h", quantum mechanics removed the implicit assumption of classical mechanics about the possibility of infinite fragmentation of the energy of physical processes. That is, quantum physical reality is also a kind of virtuum, where fantasy is presented as a kind of admission to understanding its essence (Xiong, et al. 2021).

Fantasy as a symphony of ideas is an inexplicable phenomenon of human nature. First, it gives rise to myth, legend, fairy tale, then scientific theories. In the modern reading, fantasies materialize in sci-fi worlds, fantasy, virtual realities. Fantasies stimulate the

scientific knowledge of the world; encourage the description of the implausible, unthinkable, and impossible or not corresponding to reality. In computer virtual reality, a fiction, a simulacrum, is constructed.

We agree with T. Suetin that it is impossible to find any clear limits within which the needs of the imagination can be fully satisfied. These needs reflect the insufficiency of reality, the limitations of reality, and the constant desire of Human to expand the boundaries of the world. Needs are in constant progression, they are insatiable in their essence, tirelessly grow and multiply, they reveal an eternal movement, in which the achievement of satisfaction invariably exposes incompleteness, and these needs are directed towards the infinity of their satisfaction. The human need for knowledge can never be satisfied in its absolute. And it's not even that fantasy is an eternal stimulus to knowledge, as a concentrate of ideas, as a manifestation of a keen interest in conjectures and assumptions that involve a person in the adventure of research. Such knowledge, which is not amenable to knowledge in principle, is coming. After all, only a person can wonder what will happen after the completion of his earthly path. Only a Human is tormented by the thought of a future without itself, of the future of its family, the future of this world. Here knowledge reveals its complete impotence, in the impossibility of giving any answers. However, a person is inconsolably trying to look beyond the time limits that outline the limits of its life. Perhaps, only in fantasy is a person able to draw for itself the plots of the future of its relatives, friends, the fate of its own heritage (Suetin 2017, 37). Fantasy helps a person to face the harsh reality, so it is forced to create more and more comfortable and safer worlds. However, virtual utopias and dystopias are also being created as a kind of image of the future, without which a harmonious existence in the real world is impossible. Computer virtual reality also models various catastrophic scenarios as a warning against self-destruction.

T. Suetin also emphasizes that fantasy is the most important phenomenon that defines a person as a special kind of being. And most likely, if we talk about extraterrestrial intelligence in the example of a person, then it must have this unique property. But a person has one more feature – to lose its anthropological properties from the bridle. And just as the "triumph of reason" can have a detrimental affect on human life, so the "triumph of fantasy", synthesized, produced, and introduced from the outside, is detrimental to a human being. Perhaps this is a lot of human nature. The great gifts of the psyche, and anthropological phenomena that define us as spiritual, special beings are not aimed only at the good; they have very negative manifestations on the back of the medal. The reality of fantasy insidiously reverses into the fantasy of reality. And, unfortunately, here it is impossible not to think about how life will turn into a "dream of mass consumption" as a collapse for the integrity of human existence (Suetin 2017, 40). Fantasies, first of all, are the sphere of the unconscious, therefore, if this sphere is used for the purpose of manipulating consciousness and for other malicious purposes (which reflect bad thoughts, secret intentions, and hidden motives), then the

consequences will be catastrophic. Rejection or loss of connection with reality may occur.

Dreams are even more complex constructs of the imagination, providing the creation of images directed to the near or far future. S. Smirnov sees the problem in the fact that the future is in principle inaccessible to a person, so it is forced only to construct a certain image of the future. But in order to construct its own image of the future, it must learn to see it, which means forming a new vision in itself, that is, new organs of vision as some kind of cultural "prostheses", or rather, new glasses that help to see what is not visible with simple empirical vision (Smirnov 2015, 31). On the one hand, dreams enhance the ability to foresee or even see reality. In the spiritual virtuum, the vision of the image of the future is carried out, and then virtual objects are constructed.

On the other hand, dreams are close both to prediction (an unambiguous statement of the future state of an object or event) and to the assumption or description of one or more possible options (hypotheses) for the future state of imaginary objects. Computer virtual reality can provide a forecast (the most probable state of an object or the possibility of an event) using various virtual models that objectify these objects and events.

R. Sterledev, T. Sterledeva also draw attention to the fact that, in order to preserve its essence, a person, firstly, doubles the outside world – nature, secondly, society, and thirdly, itself. But such a doubling is possible only in a reality that is as "soft" as possible, in which the world reacts to any desire of a person in the way that a person needs. A person's dream is a world objectified in a special way in a person itself. A person's dreams exist in its mind, but in a certain sense they do not depend on it. Having appeared in the human mind, the dream begins to live, as it were, an independent life. Some dreams quietly disappear, while others, on the contrary, gain strength, and their existence sometimes becomes painful for a person. A person lives a special life in its dream. We can say that in the dream is its "second home". For a person to be a person, it must have at least some sphere where it can feel as free as possible, and this is the world of its dreams. In all other worlds, a person feels infringed; its human nature is limited in addition to its desire. Moreover, modern human, as it grows older, eventually begins to get used to limiting his freedom. An adult person gets used to its lack of freedom so much that it already perceives it as a natural state and accustoms a child to this. Summing up, it can be noted that it is the inner world of dreams that gives that existential flexibility and stability, which, in turn, allow it not only to resist the vicissitudes of the world, but also to adapt the world to itself (Sterledev 2013, 20-21). Therefore, the virtual world was created to replace, with the help of a computer, unfreedom with imaginary freedom, and an unattainable dream with imaginary realities.

In modern society, especially unfair, almost all dreams turn into unattainable. Thus, dreams reflect the future state of objects or events, if there are no obstacles to foreseeing a possible reality.

Computer virtual reality creates opportunities for research in the field of computer engineering and

design. With the help of special methods, specialists try to take into account all the conditions, circumstances, and specifics of a particular imaginary object. Dreams are like intuitive insights that replenish the baggage of ideas. A computer designer is able to adapt to various life situations, learn from theory and learn from experience, understand and apply abstract concepts and existing knowledge in order to manage virtual reality. Artificial Intelligence is the general ability of a person to know the world with the help of a machine and high-speed methods; it "arms" such areas as thinking, imagination, representation, memory, perception, and sensation.

Conclusion

The spiritual virtuum in the most general sense unites all virtual manifestations of the spirit in the computer world and a person in the computer. The spiritual virtuum or the peculiar life of the Digital Spirit can be understood as a property of the soul, consisting in the predominance of spiritual, moral, and intellectual interests over material ones. The spiritual virtuum exists as the highest level of development and self-regulation of a mature collective personality, whose semantic regulators of life are the highest human values and moral regulators, and which brings these values into the virtual continuum.

Spiritual virtuum arises in the process of copying real objects or events by a person and turning them into attributes of art, or into virtual simulacra using a computer.

The connection between the Finite and the Infinite in the spiritual virtuum is of a twofold nature: firstly, any finite virtual object is not connected with an infinite variety of other possible virtual objects "outside itself", it is invariant, hard-coded; secondly, the infinite represents the variability of various characteristics of virtual objects, or images of possible virtual realities through fantasy and imagination. Consequently, when modeling any virtual object, the unity of the Finite and the Infinite are not found, however, this unity is conditional.

References

1. Budanov, Vladimir. 2014. "Problemy koevolucii antropo- i tehnosfery, kvantovo-sinergeticheskij podhod" ["Problems of co-evolution of the anthropo- and technosphere, quantum-synergetic

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ДУХОВНИЙ ВІРТУУМ: ВЗАМОДЕЙСТВИЕ КОНЕЧНОГО И БЕСКОНЕЧНОГО

Аннотация. Показан виртуум как одно из измерений социума. целью данного исследования является концептуализация феномена духовного виртуума в контексте взаимодействия бесконечного в бытии виртуума и конечного в цифровой реальности кибертехносферы. Феномен виртуума рассматривается в рамках социально-философского, онтологического и трансцендентального подходов. Каждый виртуальный объект конечен и прерывен. В духовном виртууме граница условная, мнимая. Обобщается позиция, что компьютерный дизайнер способен адаптироваться к различным жизненным ситуациям с целью управления виртуальной действительностью. Духовный виртуум или своеобразную жизнь Цифрового Духа можно понимать как свойство души, состоящее в преобладании духовных, нравственных и интеллектуальных интересов над материальными.

Ключевые слова: духовный виртуум, конечное, бесконечное, кибертехносфера, компьютерная виртуальная реальность.

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ДУХОВНИЙ ВІРТУУМ: ВЗАЄМОДІЯ СКІНЧЕНОГО І НЕСКІНЧЕНОГО

Вступ. Показано, що віртуум як один із вимірів соціуму є фікатором моментів матеріалізації ідей, в порівнянні з якими, комп'ютерна віртуальна реальність є практично повністю позбавленою духовності. **Мета і завдання.** Метою даного дослідження є концептуалізація феномену духовного віртууму в контексті взаємодії нескінченного в бутті віртууму і кінцевого в цифровій реальності кибертехносфери. **Методи дослідження.** Феномен віртууму розглядається в рамках соціально-філософського, онтологічного і трансцендентного підходів. У соціально-філософському контексті духовний віртуум постає як високотехнологічне інтелектуальне мірило в континуумі нинішньої антропотехносфери. Онтологічний підхід актуалізує зв'язок духовного віртуального з діяльністю інтелекту, свідомості, логіки і особливо з мораллю. Трансцендентний підхід передбачає розуміння, опис і фіксацію присутності духовного початку у всіх вимірах суспільства, включаючи віртуум. **Результати дослідження.** Скінченний у духовному віртуумі – це остання межа досягнення мети, кінцева причина. Скінченний характеризує будь-який певний, обмежений з точки

approach". Slozhnost. Razum. Postneklassika. Complexity. Intelligence. Postnonclassic (4): 34-47. doi: 10.127037/7651.

2. Danilenko, Yuriy. 2016. "Perehod konechnogo v istinno beskonechnoe" ["The transition of the finite to the truly infinite"]. Gumanitarij, Humanitarian 22 (6): 246-251. <https://cyberleninka.ru/article/n/perehod-konechnogo-v-istinno-beskonechnoe>

3. Drotianko, Liubov. 2019. "Komunikaciyi v socialnih merezhah i fenomen multikulturalizmu" ["Communication in social networks and the phenomenon of multiculturalism"]. Visnyk Natsionalnoho aviatsiinoho universytetu. Seriya: Filozofia. Kulturolohiia, Proceedings of the National Aviation University. Series: Philosophy. Cultural Studies 1(29): 16-21. doi: <https://doi.org/10.18372/2412-2157.29.13885>.

4. Konyaev, Sergey. 2018. "Ontologicheskie aspekty chelovecheskoj fantazii" ["Ontological aspects of human fantasy"]. In Filozofskaya antropologiya. Razdel Chelovecheskie ekzistencyy. Philosophical anthropology. Section Human existentials 4(1): 81-101. doi: 10.21146/2414-3715-2018-4-1-81-101

5. Kurilovich, Ivan. 2019. "Myshlenie beskonechnogo kak epistemologicheskaya problema filozofskoy sistemy A. Kozheva [Thinking of the Infinite as an Epistemological Problem of A. Kozhev's Philosophical System] Filozofskij zhurnal. Philosophy Journal 12(3): 33-47. <https://cyberleninka.ru/article/n/myshlenie-beskonechnogokak-epistemologicheskaya-problemafilozofskoy-sistemy-a-kozheva>

6. Kharchenko, Yuliya. 2020. "Topologiya "unikalnogo" ta yiyi vpliv na konstruyuvannya socialnogo virtuuma" ["Topology of "unique" and its impact on the construction of social virtuum"]. Visnyk Natsionalnoho aviatsiinoho universytetu. Seriya: Filozofia. Kulturolohiia, Proceedings of the National Aviation University. Series: Philosophy. Cultural Studies 1 (31): 43-46. doi:<https://doi.org/10.18372/2412-2157.31.14824>

7. Smirnov, Sergey. 2015. Prognoz i forsajt: dve paradigmy budushego. Metodologicheskij aspekt. [Forecast and foresight: two paradigms of the future. methodological aspect]. Vestnik NGUEU, Bulletin of NSUEM (2): 27–45. <https://cyberleninka.ru/article/n/prognoz-i-forsajt-dve-paradigmy-buduschego-metodologicheskij-aspekt>

8. Sterledev, Roman and Tamara Sterledeva. 2013. "Mechta kak sushnostnoe svojstvo cheloveka" ["Dream as an essential property of a person"]. In Teoriya i praktika obshchestvennogo razvitiya, Theory and practice of social development (6): 18-21. <https://cyberleninka.ru/article/n/mechta-kak-suschnostnoe-svoystvo-cheloveka>

9. Suetin, Trifon. 2017. "Realnost fantazii" ["The reality of fantasy"] In Filozofskaya antropologiya, Philosophical anthropology 3(1): 27-45. doi: 10.21146/2414-3715-2017-3-1-27-45.

10. Xiong, Jianghao, Hsiang, En-Lin, He, Ziqian, Zhan, Tao and Wu, Shin-Tson. 2021. Augmented reality and virtual reality displays: emerging technologies and future perspectives Light: Science & Applications 10(1):216 doi: 10.1038/s41377-021-00658-8.

зору технічних можливостей, об'єкт. Кожен віртуальний об'єкт є кінцевим і переривчастим. Визначеність надається Скінченному за його межею. Вона може бути просторовою, часовою, кількісною та якісною. У духовному віртуумі межа є умовною, уявною. Нескінченне, як таке, що не має кінця або немислиме, може бути представлене в духовному віртуумі як поза-просторово-часовий континуум, оскільки будь-яка межа є над-буквальною, з урахуванням впливу ірраціонального і несвідомого на творчість і виробництво ідей. **Обговорення.** Узагальнено позицію про те, що комп'ютерний дизайнер здатний: адаптуватися до різних життєвих ситуацій; вивчати і засвоювати інформацію на основі отриманого досвіду; розуміти і застосовувати абстрактні поняття і наявні знання з метою управління віртуальною реальністю. **Висновки.** Духовний віртуум у найзагальнішому сенсі об'єднує всі віртуальні прояви духу в комп'ютерному світі і людини в комп'ютері. Духовний віртуум як життя Цифрового Духу є властивістю душі, що полягає в переважанні духовних, моральних та інтелектуальних інтересів над матеріальними.

Ключові слова: духовний віртуум, скінчений, нескінченний, кібертехносфера, комп'ютерна віртуальна реальність.

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ТРАНСДИСЦИПЛІНАРНІ ПЕРСПЕКТИВИ ЕКСПЕРИМЕНТАЛЬНИХ ПРОЕКТІВ НАУКОВОГО МИСТЕЦТВА

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Анотація. У статті досліджується проблема оновлення комунікативно-методологічного інструментарію філософії науки та можливостей застосування міждисциплінарних підходів і трансдисциплінарних стратегій. Трансдисциплінарність розглядається як метарівень, який ґрунтується на поєднанні різноманітних когнітивних стратегій та способів мислення, поєднанні теорії і практики, істинності та практичної корисності. Окреслюються перспективи наукового мистецтва як трансдисциплінарної платформи для втілення спільних експериментальних проектів науки і мистецтва.

Ключові слова: філософія науки, наука, мистецтво, міждисциплінарність, трансдисциплінарність, комунікація, зона обміну, наукове мистецтво / science art.

Вступ

Тематика трансдисциплінарності актуалізована в наукових і філософських дослідженнях з останньої третини ХХ сторіччя. Нові тенденції в розвитку науки цього періоду пов'язані з формуванням і осмисленням ситуацій автономії наукового знання (а скоріше – порушенням цієї автономії), а також з формуванням таких пізнавальних ситуацій, які передбачають вихід досліджень у помежові території науки з життєвим світом, на яких домінують запити і вимоги практичної сфери. Згадаємо, що поширені в науці ситуації міждисциплінарності вже вимагають зміни характеру науки, виходу за її дисциплінарні кордони, межі лабораторій, а значить межі наукових дисциплін стають більш гнучкими, а перед дослідниками постають питання поєднання істинності та практичної корисності.

Внутрішніми причинами становлення трансдисциплінарних стратегій стали домінування проблемно-орієнтованих форм дослідницької діяльності в науці, а саме – проектування, прогнозування, конструювання, основою і особливістю яких є спільне становлення предмета і метода проблемної галузі наукового дослідження. Вимогою нових трансдисциплінарних конфігурацій стало поєднання різноманітності та єдності, а власне трансдисциплінарність стала розглядатися як місток між поступом наукового знання і вирішенням конкретних проблем практично-прикладної сфери.

«Трансдисциплінарність», з одного боку, означає методологічну стратегію наукового дослідження, а з іншого – нову дисциплінарну практику, яка накреслює перспективи наукових досліджень з оновленням комунікативно-методологічного інструментарію, не обмеженого існуючими академічними кордонами. Трансдисциплінарність як стратегія має інститу-

ціональний статус, який закріплений на рівні утвореного в 1987 році Міжнародного центру трансдисциплінарних досліджень (International Centre for Transdisciplinary Research, CIRET 1987), а також багатьох теоретичних і прикладних інститутів. Засновниками і визнаними лідерами трансдисциплінарного руху вважають французького вченого і філософа Едгара Морена і відомого фізика-теоретика Басараба Ніколеску. До Хартії трансдисциплінарності, прийнятої на першому з'їзді дослідників, доєдналася на сьогодні значна кількість сучасних науковців.

Термін «трансдисциплінарність» був запроваджений для систематичного використання у Центрі Едгара Морена в Парижі (CETSAH, Центр трансдисциплінарних досліджень у соціології, антропології й історії). Е. Морен наголосив на розрізненні у визначенні полідисциплінарності дослідницької сфери, міждисциплінарності дослідження і трансдисциплінарності стратегії дослідження. Для обґрунтування такого розрізнення Е. Морен дав аналіз відмінності між поняттям «міждисциплінарність» і «трансдисциплінарність». На його думку, міждисциплінарність означає те, що різні дисципліни для вирішення деякого питання сідають за одним столом, тому міждисциплінарність прагне обміну і кооперації, що є доволі органічним у науковому дослідженні. А у сфері трансдисциплінарності відбувається інакше: йдеться про перенесення когнітивних схем з одних дисциплін в інші (Морен 2013), тому що трансдисциплінарність характеризує такі дослідження, які виходять за межі конкретних дисциплін, перетинають їхні кордони і прагнуть створення цілісного бачення предмета дослідження.

У свою чергу Басараб Ніколеску виділив три методологічних основоположення трансдисциплінарності, які відрізняють її від міждисциплінарності. Перше основоположення стосується визнання