



The conception of sustainable development in the light of converging technologies

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Abstract

In the age of converging technologies, the problem of harmonizing permanent technological progress and sustainable human development is actualized. On the one hand, it is necessary to bring the high strategic status of converging technologies in line with high axiological priorities for sustainable development; on the other hand, the conception of sustainable development should be updated taking into account the new realities of modern technological development. The Russian scientific literature is dominated by the understanding of sustainable development as a safe type of socio-natural interaction aimed at the survival of mankind and the preservation of nature, their coexistence and co-evolution. At the same time, we must recognize that the ecological interpretation of sustainable development is very important and indeed a priority, but it is still only the initial stage of understanding the spiritual and humanistic meaning of sustainable development as a cosmic phenomenon. In particular, in the structure of the conception of sustainable development, the problem of the elevation of spiritual humanism in its connection with a new stage of technological dynamism is now filled with a special meaning. We consider the spiritual and humanistic project of sustainable technological development as an alternative to the idea of a posthuman future and as an antipode to the technocratic paradigm in general.

Keywords: sustainable development, humanism, converging technologies, technological dynamism, techno-socio-natural processes

Mantatov V, Mantatova L, Nasibulina A, Tutubalin V (2019) The conception of sustainable development in the light of converging technologies. *Eurasia J Biosci* 13: 2159-2165.

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INTRODUCTION

In philosophy, “the concept is defined by the inseparability of a finite number of heterogeneous components traversed by a point of absolute survey at infinite speed” (Deleuze and Guattari 2009: 27-28). We consider the concept of sustainable development as an epistemic space of n-dimensions: natural-ecological, socio-economic, techno-socio-natural, etc. Today, in the process of social practice, as a rule, one of the dimensions of sustainable development is singled out, ignoring the systemic nature of sustainable development.

In the age of converging technologies, the problem of harmonizing permanent technological progress and sustainable human development is actualized (Galushkin 2015). On the one hand, it is necessary to bring the high strategic status of converging technologies in line with high axiological priorities for sustainable development; on the other hand, the conception of sustainable development should be updated taking into account the new realities of modern technological development (Baibarin et al. 2016). However, now in the domestic philosophical literature the tendency of opposing technological progress and the sustainable development of civilization prevails. For

example, the Russian philosopher Valishin (2018: 123) proposes to replace the strategy of sustainable development with the strategy of dynamism. In this case, the author wrongfully limits the content of the concept of sustainable development only by the postulate of sustainability, which contradicts the dialectical meaning and spirit of sustainable development. Hegel (1971) noted that “the essence is hidden somewhere behind the text, and people know much more than they say, namely the spirit and the grounds on which they speak” (Hegel 1971: 551). The essence of sustainable development is creative evolution; the strategy of sustainable development is based on the strategy of dynamism. But this understanding of sustainable development needs a serious philosophical, especially ontological justification, based on the structure of Reality itself as a unity of spirit and Nature. In this unity Spirit expresses in the highest degree the dynamism of Matter itself.

The conception of sustainable development itself needs to be fundamentally renewed and elevated. The famous Russian philosopher Ursul (2018: 97) rightly

Received: July 2019

Accepted: November 2019

Printed: December 2019

observes: “it is hardly necessary to imagine that the desired conception of sustainable development has already been created and the problem is only to implement it”. The theoretical incompleteness and philosophical incompleteness of the official conception of sustainable development is one of the reasons that it did not take over the minds and hearts of people and did not become a “material force”, in terms of Marxism. It is appropriate to recall here that the very idea of sustainable development emerged as a result of thinking about environmental problems. “In its broadest sense, the strategy for sustainable development aims to promote harmony among human beings and between humanity and nature” (Evtsev and Perelet 1989: 68). The Russian scientific literature is dominated by the understanding of sustainable development as a safe type of socio-natural interaction aimed at the survival of mankind and the preservation of nature, their coexistence and co-evolution. At the same time, we must recognize that the ecological interpretation of sustainable development is very important and indeed a priority, but it is still only the initial stage of understanding the spiritual and humanistic meaning of sustainable development as a cosmic phenomenon. In particular, in the structure of the conception of sustainable development, the problem of the elevation of spiritual and moral culture in its connection with a newest technological revolution is now filled with a special meaning. In our view, the spiritual and humanistic imperative of sustainable development, corresponding to the spirit of the new era of technological dynamism, should be clearly and clearly formulated.

LITERATURE REVIEW

The problem of coordinating sustainable development and the new stage of technological progress (converging technologies), in our opinion, is not properly philosophically comprehended in the scientific literature. In this context, we are interested in the technological image of the future presented there. “A Brief History of the Future”, written by the Israeli philosopher Harari (2018), is widely known and popular. We are not able to stop the course of history, but we can choose the direction of movement, believes Harari. Such thinking is consistent with the idea of sustainable development.

However, the direction of movement chosen by Harari seems to us extremely anti-human. Harari writes: “Looking back, many think that the downfall of the pharaohs and the death of God were both positive developments. Maybe the collapse of humanism will also be beneficial” (Ibid.: 84). According to Harari, at least two scenarios can send humanistic belief in the scrap: a) people will lose their economic, military, social utility; b) the socio-economic system will appreciate only

technologically advanced superhumans and they will be the new elite of society (Ibid.: 357).

Harari argues that it is necessary to give freedom to natural selection in society. If we follow the logic of social Darwinism, then humanity, in his opinion, will eventually produce superhumans (Ibid.: 298). He believes that this concept of superhumans (Homo Deus), based on new technologies, will play a significant role in shaping the look of the 21st century. According to Harari, “The life sciences undermine liberalism, arguing that the free individual is just a fictional tale concocted by an assembly of biochemical algorithms” (Ibid.: 355). In other words, our “I” is nothing but a “Quantified Self” (Dormehl 2014: 12). Harari warns: “The new technologies of the twenty-first century may thus reverse the humanist revolution, stripping humans of their authority, and empowering non-human algorithms instead ... The individual will not be crushed by Big Brother; it will disintegrate from within” (Harari 2018: 404).

An even more radical position is held by the European philosopher Bostrom (2014), who believes that artificial intelligence is likely to simply destroy all of humanity (Bostrom 2014: 149).

Nowadays the Dataism is gaining great influence in the scientific establishment. The dataists don't respect neither Human Being nor Humanity. They worship only Big Data. The highest value, according to dataism, is not human freedom, but “freedom of information”. Dataists believe that the universe consists of data (information) and that the value of any phenomenon or entity is determined by their contribution to data processing (Hidalgo 2015, Kelly 2010). Dataists think that a person is no longer able to cope with huge streams of data (information). Therefore, data processing should be entrusted to computer (electronic) algorithms, much more powerful than the human brain. Harari writes: “People will no longer see themselves as autonomous beings running their lives according to their wishes, and instead become accustomed to seeing themselves as a collection of biochemical mechanisms that is constantly monitored and guided by a network of electronic algorithms” (Harari 2018: 385-386). In the new technological era, people will turn into an integral part of the gigantic global network, and such a future for mankind seems quite acceptable for most technologically oriented researchers of our time.

In this context, we are also interested in studies that focus on the development of social practices that can direct technological progress along favorable paths and put converging technologies at the service of man and mankind. For example, futurologist Kelly (2011) develops the concept of protopia – gradual progressive technological steps along the most favorable trajectories. The argument in favor of protopia is the potential ability to control all processes in society on the basis of information and communication technologies.

Kelly (2017) presented to the public a description of the twelve technological trends that determine our shared future.

Unlike Harari and other technocrats, we believe in humanism, we think that what is needed is not the “collapse of humanism”, but the renewal and elevation of humanism based on technoscience and high technology. As you know, the implementation of converging technologies has not only destructive, but also constructive consequences.

RESEARCH METHODS

The main method for studying the sustainable development of society in its connection with technological progress is the dialectics of complex self-developing systems. The features of conceptual understanding of self-developing systems were described in Hegel's dialectics. Some concretizations of this understanding were also made by Russian philosophers in the process of dialectical comprehension of synergetics (Stepin 2007: 97-102). During the last few decades, some well-known researchers have paid attention to synergetics and dialectics as necessary tools for scientific research (Guespin-Michel 2016: 10-11). The problem of the relationship between dialectics and synergetics remains one of the most interesting in the study of the logic of global sustainable development as an integrated techno-socio-natural process. In our opinion, a concrete-universal theory of development can be the first step in solving this problem (Orlov 1999: 167).

The concrete-universal theory of development is able to give a deeper understanding of the phenomenon of development than its traditional abstract-universal understanding, which does not reflect the richness of the special, the individual in the process of development. A concrete-universal understanding of development is necessary because it will be a philosophical rethinking of those ideas about complex techno-socio-natural processes that were spontaneously put forward in the special sciences and in some forms of their interdisciplinary interaction each time expressing the movement from the abstract to the thought-concrete.

For example, one of the achievements on this path is the theory of metasystem transitions, which is associated with the ideas of second-order cybernetics and related conceptions. “Metasystem transition creates the highest level of organization – meta-level in relation to the level of organization of integrated subsystems” (Turchin 2000: 47). The conceptual apparatus and certain propositions formulated in the second-order cybernetics and the theory of metasystem transitions can be successfully used outside the radical constructivist discourse with which these conceptions are often associated. It is known that this discourse associated with a non-critical metonymy regarding the

category of the subject and too broad interpretation of the subjectivity allowing subjective-idealistic interpretations of subject's activity. But being adapted within the framework of the dialectically revised doctrine of self-organization, in integration with the concrete-universal theory of development, the above concepts can be developed without contradiction to the classical principle of correspondence and without opposition to the explanation of noogenesis by the theory of reflection.

The most important stage of this noogenesis can be the creation of a superintelligence, the achievement of a technological singularity, but outside the dystopian scenarios that threaten us with universal catastrophe. Such a technological breakthrough is possible on the path of sustainable development, understood as a long-term existence of humanity in harmonious unity with the surrounding (planetary-cosmic) environment (Mantatov and Tutubalin 2018: 720). And what should be the balance between society and nature, between man and the “inorganic body of man” (Marx and Engels 1983: 396)?

The attempt of theoretical understanding of this state is made in the conception of techno-humanitarian balance. It explores the causal relationship between human activity, man-made crises, social catastrophes, and socio-historical progress. In this concept, the law of techno-humanitarian balance is formulated, reflecting “the system dependence between three variables – between technological potential, the quality of cultural regulation and internal stability: the higher the power of production and combat technologies, the more perfect means of deterrence of aggression are necessary for the preservation of society” (Nazaretyan 2015: 497). It is obvious that this balance is unattainable without effective management of sustainable development of techno-socio-natural processes.

In the study of techno-socio-natural processes, it is possible to apply some of the principles of the actor-network theory of Latour (2006), in particular, the principle of “delegation of agency”, i.e. the mechanism of equalizing technological objects in the ability to act on a par with human agents. By obtaining delegated competence, “non-humans” save people from the need for physical presence. This agglomeration, where relations between people are strengthened, accelerated, modified by technology, is for Latour a society, or a network of heterogeneous actors. In other words, the conditions for the existence of human society are the power of technology; they make society sustainable. Latour supposes that “the missing masses of our society are to be found among the nonhuman mechanisms” (Latour 2006: 219). The delegation of competencies is not one-sided: people and non-people are embedded in each other, connected by reciprocal relations – and this must be taken into account for the safe coexistence of people and objects. The authors believe that for a really deep study of such complexes it is necessary to follow

the principles of ontological substantialism and epistemological optimism (Mantatov and Tutubalin 2018: 720).

RESULTS AND DISCUSSION

We live in an era of global civilizational transformation. The leading factor in this transformation is technological innovation. Today, great hopes are placed on the innovative potential of converging technologies, the development and implementation of which is considered as a new stage of technological development in general. The discourse on converging technologies is now being conducted in the West in the context of a technocratic paradigm. An example is the NBIC initiative launched on behalf of the US National Science Foundation in 2001 (Roco et al. 2013).

Two aspects can be found in this initiative: the first one is associated with a profound transformation of the method of development of technological civilization itself, and the second one is related to the problems of "expanding human capabilities". The NBIC model is believed to have "spawned" the transhumanist project of the future. A fairly complete review of the conception of transhumanism is given in the book "New technologies and the continuation of human evolution? The transhumanist project of the future" (Pride and Korotaev 2008). A panoramic view of transhumanist evolution is presented in the book "Global Future 2045. Convergent technologies (NBICS) and transhumanist evolution" (Dubrovsky 2013). A critical assessment of transhumanism as one of the most dangerous ideas of our time was given by the famous American scientist F. Fukuyama (2004). The argument directed against transhumanism by Habermas (2002) in his book "The future of human nature" is also of epistemological value.

We will not analyze the above works here. We only note here that the views of transhumanists themselves are heterogeneous and contradictory. Moderate transhumanists, such as techno-extropists, focus on upgrading basic human abilities. R. Kurzweil (2015) and Bostrom (2014) write that radical transhumanists see in the NBIC model a tool for creating a posthuman society (Kurzweil and Grossman 2004, Kurzweil 2015). In this interpretation, the conception of transhumanism is indeed one of the most dangerous technocratic anti-utopias.

Transhumanism is usually understood as a set of ideological attitudes associated with the improvement of human biological properties due to technological progress. In the literature on transhumanism, this ideological trend is considered as a way of setting goals, the technological implementation of which can lead to posthumanism and posthuman society: posthumanism forms the goal, transhumanism forms the way (Krüger 2004: 75-77). Modern man, according to

transhumanism, is the beginning of the evolution of the species *Homo Sapiens* (Pride and Korotaev 2008).

Radical transhumanists (i.e. posthumanists) as convinced and consistent technocrats develop the idea of technological improvement of human biological properties. Earlier, technology was used to conquer the external nature (environment), today converging technologies penetrate the internal nature of man himself, transforming the existential foundations of human life. Radical transhumanists hope for the flourishing of human civilization through overcoming the current biological limitations of human beings and the augmentation of their physical, reproductive and mental abilities. "When asked 'How far should treatment go?,' the transhumanists set no limits" (Joachim and Plévert 2009: 93). The acceptance of this "limitlessness" completely contradicts the essence and meaning of the concept of sustainable development. Just as there are planetary limits for the growth of the world gross product, there are humanistic boundaries for the increment and change of human characteristics, beyond which begins the destruction of man as such.

One of the principles limiting the pretensions of transhumanism is the precautionary principle. This principle is an integral part of the conception of sustainable development and the "World Charter for Nature". According to this principle, doubts about the safety of a particular technology may become the basis for restrictions on research and technological activities.

In the Russian philosophical literature, transhumanist discourse, based on the scenario of convergent technologization of man, focuses primarily on the problems of humanism and anti-humanism. The most important characteristic of modern humanism is the acceptance of the self-worth of human individuality. The modern humanist believes not in God, but in the creative potential of man himself. According to some Russian philosophers, humanism and transhumanism have common origins and are based on the principle of anthropocentrism (Gnatik 2012: 350-351). Russian transhumanists argue that for the survival of mankind, it is necessary to transform human nature technologically and create a posthuman. They believe that technological measures can stop the degradation of a person "mired in insatiable consumerism". The ideology of transhumanism is considered by its Russian apologists as the ideology of the New Enlightenment, capable of overcoming the "boundaries of the biological presets" related to the consumer lifestyle (Dubrovsky 2013: 187).

But there is another, quite reasoned position in Russian philosophy, according to which the idea of technological transformation of a human being and the creation of a posthuman is a deadly anti-utopia. Many authors write about it in the collective book "Man and his future" (Belkina 2012). Other authors also substantiate the idea that humanity may die in the course of uncontrolled technological development ("Science.

Technology. Person” 2015: 11). Famous Russian philosopher Kutyryov (2010) believes that transhumanism is a denial of humanism and that it blesses the transformation of man into the material of the technological process. He directly points to the anti-humanistic orientation of transhumanism: “We must proceed from the acceptance of the claim that the ideas of the informational and biotranshumanistic de(re)construction of a human being are its theoretical genocide, a form of suicide” (Ibid., p. 80). Therefore, the existential meaning of sustainable development as an all-planetary movement for the survival of mankind under the conditions of the global anthropoecological crisis and the growing deadly risks of technological progress, including technological singularity, is naturally increasing.

The unhealthy excitement around the problems of creating posthuman leads to the inevitable silencing of real environmental threats and technological risks. Today, the attention of science and the public is absolutely wrongly shifting from vital existential problems to the utopian scenario of the posthuman future, while the real life of a person is becoming darker and darker. Nature is impoverished, society is running wild.

It seems that those Russian philosophers are right who recognize that it is necessary to direct the vector of civilizational development from the pole of anti-humanism to the pole of new humanism. Particular attention should be paid to the philosophical understanding of the socio-natural interaction in the age of converging technologies, to an interdisciplinary analysis of the socio-natural globalization, the evolution of the techno-anthroposphere, converging interdisciplinarity, etc. It is proposed to supplement the concept of planetary boundaries (Rockström 2009: 1-33) with the concept of socio-humanitarian boundaries, the transgression of which can lead to the denial of life and self-destruction of human civilization (Arshinov and Budanov 2016, Bransky et al. 2017, Dergacheva 2016, Liseev 2018). Thus, Russian philosophy is actively seeking to comprehend the new socio-humanitarian situation that necessarily arises in the process of developing new converging technologies.

CONCLUSION

Russian philosophers propose to create a cognitive image of a sustainable future defined by technological innovations. At the same time, it is impossible to ignore the historical fact that technological innovation is a destabilizing factor. Undoubtedly, the introduction of radical forms of technological improvement of a human being will inevitably create many social problems and “inferiority complexes”. And yet, in our opinion, transhumanism should not be fully identified with posthumanism or antihumanism. The transhumanist

discourse today is in demand as an epistemic space where the super-task of modern technological development is formed. We believe that the process of creating and applying new converging technologies should be “immersed” in the global context of the self-developing integrated system “Man – Technology – Society – Environment”. Since all technical systems have a natural basis, they can be considered as states of this self-developing integral system. It also means that this integrated system is able to limit and direct technological processes.

Sustainable development is a fundamental ontological characteristic of this complex self-developing integrated system; therefore, the conception of sustainable development can be reformulated into a program of universal (anthropocosmic) evolutionism. The task is to coordinate technological development as a special line of anthropocosmic evolution with the laws of sustainable development of this integrity as the Universe. Today, technological development is on the path to the formation of a reasonable technosphere (the “second noosphere”) through the destruction of the biosphere and the destruction of man. The paradox of the situation is that the human mind in the conditions of technocratic civilization turned out to be directed against humanity itself and against life in general.

One of the positive tasks of transhumanism at the dawn of its formation was to explore practical ways of expanding human consciousness, which is carried out in the synthesis of scientific knowledge, spiritual practices and philosophical reflection. However, later this task was forgotten and, as a result, transhumanism degenerated into technocratic posthumanism, into a denial of the very idea of humanism. We can say: transhumanism thinks of a human being as a transcending being, but does not reach the thought of its *humanitas*. In other words, it does not reach the true being and true dignity of man. In our opinion, a significant contribution to understanding the essence of man was made by the XXIV World Philosophical Congress, which was held in Beijing (PRC) in August 2018. A certain philosophical perspective is, for example, the concept of Confucian spiritual humanism, which was presented at the Congress by the famous Chinese philosopher Tu Weiming. “Human being is associated with all forms of being: minerals, plants and animals. If we delve deeper in search of connections, we will find out that we are part of the continuum. However, the uniqueness of human being is different from other forms of being. The defining human characteristics in no way come down to those characteristics that have become integral parts of the human condition” (Tu 2019: 23).

We believe that it is necessary to develop a spiritual-humanistic (anthropocosmic) project for sustainable technological development, based on the materials of the XXIV World Philosophical Congress, in particular, on the conception of Confucian humanism. This project can

become an important part of the new anti-technocratic paradigm and of the real alternative to the ideology of posthumanism.

In the 20th century, socialism conquered the vital world of half of humanity, putting forward a project to transform the world on the basis of scientific and technological progress. In the 21st century, the spiritual and humanistic conception of sustainable development

can conquer the whole world on the basis of technoscience and high technology.

ACKNOWLEDGEMENTS

The reported study was funded by RFBR according to the research project № 18-411-030016.

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