Prospects of Culture, Science and Human in the Context of a Technocratic Tide of the Post-Industrial Era

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Abstract: The main aim of the study is to investigate prerequisites, essence and possible consequences of deaxiologisation trends in culture and deanthropologisation tendencies in science which arose out in the post-industrial age. Globalization processes are of a great importance in deprivation the science in its technocratic mechanistic interpretation of its historically determined constructive "human-centric" potential that had been implementing through creation and development of spiritual foundations of a human and society. The new shape of science – techno-science – exists without general metaphysical basis, summarizing and generalizable epistemological principles and person-oriented beginnings. It becomes to signify the return to mechanism in the field of implementation of logical procedures and processes but in the new – technocratic – dimension. The "new" mechanism, unlike the "classic", is not about reducing the nature of man, society and culture to their nature-centric grounds that base and depend on physical laws, but is about orientating to extrabiological and virtual technical analogies, so it makes one to point out comprehensive competition between the human and artificial intelligence in all fields of vital activity. The main points and conclusions have their grounds on analysis of the most significant stages of science development from classics to post-non-classics.

Key words: Post-industrial era, Technological order, Post-human, Post-science, Conceptual thinking.

1. INTRODUCTION

The transition from industrial to postindustrial society drastically changes the understanding of science and culture, which forms new images of these phenomena in public consciousness. From this point of view, we are talking about their actual "rediscovery". As an example, the image of science in the postindustrial (globalization) era is paradoxically constructed exclusively within the conceptual paradigm of the technocratic dimension based on "technoscience". According to it, "the technogenic environment is transformed from... an application to scientific knowledge to the natural environment of its development" (Andreev, 2011; Stoletov, 2014). Under these conditions, when "measuring" the achievements of culture (Hovstede, 2002), "spiritual production" in general and science in particular, the subject and object of which is a person, are recognized as secondary. The first place is occupied by "material production" devoid of project potential in contrast to the "late industrial" era of the twentieth century, the purpose of which was "human saving". The task of material production becomes the creation of technologies that not only radically change the labour market, but also "regulate" the social stratification structure (Martynova, 2020).

Here we are talking about "an autonomous development of science, which no longer attaches importance to the feedback between the economic environment and the focus of the technological process", which "turns science itself into a direct production force" devoid of essentially a "human dimension". And since a whole direction in science called technological determinism has built on the absolutization of the role of technology, the concept of "technological order" in the conditions of a post-industrial society becomes the main unit of measurement for the achievements of modern culture (Byrne, 2020).

But if we consider that the future is not chosen by the people, but by the ruling elites, actually depriving humanity of a choice, the post-industrial era is not aimed at Progress, as it was in the industrial era, but at a new technological order, where the dominant position in the binary opposition "man-machine" is occupied by the latter. Bringing the technological order to the "expert level" makes the search for reasonable limits of "substitution" of human technology into a problem of paramount importance (Sullivan, 2020).

2. METHODS

The problem is that being guided, on the one hand, by the philosophical principles of utilitarianism and pragmatism, and on the other, by remaining in the post-industrial era at an empirical level of insight into reality, devoid of prognostic potential, some western (US, UK, etc.) technocrats and Russian scientific and technical

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community embedded in the Western model of "scientific practice", continue to be in the grip of a "mechanistic" vision of reality, "opposed to a realistic assumption" (Yurevich, 2011; Byrne, 2020). Since they don't have access to the level of theoretical understanding that has the only predictive vision / potential, it is their environment that possesses "technocratic" mythology based on science fiction (G. Wells; W. Gibson; R. Bradbury, and others) erasing the boundaries between human and "machine "activity and "painting" a "technocratic" picture of the world, devoid of a human "face". It is not surprising that when in the post-industrial era the "technocratic mythology" (for lack of other ideas) moves from the position of scientific-utopian "foresights" into the field of planning the present as the future, a new round of technological order begins to be perceived as an achievable reality.

This is despite the fact that in the "late-industrial" era, Western "technologized science (mainly) mastered... ideas, concepts ... and principles of designing experimental facilities obtained by previous generations of scientists" (Yurevich, 2011). For two decades of the XXI century, not a single discovery was also made "comparable to the discovery of a gene, molecules, with the development of relevant theories" (Yurevich, 2011). As a result, at the stage of the post-industrial era, the "development paradigm" (ideas of the diversity of the technosphere) is replaced by the "paradigm of uniformity" ("mechanization" of the technosphere), which required a fundamental change (mass consumption culture) in the psychology of Modern Human.

The movement of the post-industrial era towards "bare" technicalism, when culture is understood exclusively as a "scientific and technical" phenomenon, makes it possible to speak of a fait accompli about the victory of "neo-technocrats," for whom technological progress is building a system of "supbiological activity programs" (Rozov, 2010) (digitalization, e-government, robotics, "cyber technologies", etc.), over realistically minded scientists-technocrats. The latter understand Progress as a means and assign the technology a "modest" role in improving the quality of human life.

But, given that "technicalization" is "not only... machines and tools, (but also) an idea of the world that guides our perception of everything that exists" (Grant, 1986; Martynova, 2020), then a post-industrial society formed under the influence of myths about a technical revolution of the future, is a "technotronic society" with a different vision of the world in the cultural, social, economic and psychological terms. Actually, the traditional foundations are being destroyed under the influence of "another vision" of the technotronic society: family and intergenerational ties, ideological attitudes that promote national identity and social integration, and the character of figurative perception are changing (Martynova, 2020). And most importantly, the problem of finding the meaning of being is being removed.

From this perspective, measuring cultural achievements by technological orders not only brings closer the onset of the post-culture era, which is characterized by "the practical use of cultural achievements after the disappearance of culture itself and the social system that generated it" (Rozov, 2010), but it also does not allow a realistic assessment of the consequences of its onset. Eliminating man from the technological chain, "neo-technocrats" do not take into account the lessons of history: any revolution (including "technocratic") devours "its children" also.

Here, a deliberately non-verbalisable problem comes to the fore: if in the conditions of post-culture a system of "super-biological programs of activity" is being built, the management of which is delegated not to humans, but to artificial intelligence (AI), humanity, in fact, enters the era of "post-science" when new technologies are developed not to solve the accumulated "global problems of mankind", but exclusively as a "target product" to exclude a human from the process of invention, i.e. creative process aimed at solving complex technical problems (AI), planning (AI) and production (robotics, AI). It does not take into account that the AI itself, created exclusively for processing a large amount of information, is not capable of making discoveries, which means that it is not capable of creative insights and, as a result, scientific breakthroughs. To do this, we need humans who are open to change, which means that they are the only ones capable (in contrast to AI) of finding non-standard solutions to complex economic, political, socio-cultural, technical and other problems.

3. RESULTS AND DISCUSSION

From this point of view, the transfer to science of the definition of post-culture as "super-industrial" given by E. Toffler (Toffler, 2008) only "globalizes" the understanding of this problem. Here we should already be talking about such a phenomenon as "post-science". Moreover, even in the middle of the twentieth century, L. Loudan stated that "science has become an abundant source of problems for some prominent philosophers and sociologists of the last half of the

(twentieth) century" (Loudan, 1987; Sullivan, 2020). In the 21st century, this applies not only to "philosophers" and "sociologists", but also to "neo-technocrats".

If we turn to the idea that in crisis periods there is a "transition ... to a new paradigm from which a new tradition of "normal science" can be born (Kuhn 2009), completely devoid of the "human dimension" ("scientific" modern), i.e. waiving from axiological and cognitive aspects in cognition (as a "scientific" archaic) changes not only the "attitude of man to nature" and the latter's place in the system of "social production", but also the idea of the essence of Progress . But in this paradigm where cognition loses its personal character, which means that human intellect is not in demand, a human himself appear in the hypostasis of a "post-human".

In this context, we are talking about the crisis of science as a rational form of cognition associated with the waiving from conceptual thinking. And since it is cognition and conceptual thinking that are the basic foundations of fundamental and applied science, waiving from them in the conditions of a "new technocratic tide" of the post-industrial era can be fatal. In fact, if conceptual thinking forms concrete historical pictures of the world: mechanical, chemical, physical, biological, social, scientific, then without conceptual thinking, the idea of reality "degrades" to the level of "subjective imaginary" of some individuals united only by a common "virtual illusion", which has nothing to do with reality. Not surprisingly that ignoring this fact, the "post-industrial" neotechnocrats sincerely believe that the brain of modern man is a "computer that must obey the laws of physics. Thus, the choice that ... [he] makes must also obey these laws" (Koyn, 2017). From these positions, the current crisis of culture, man and science is largely the result of a crisis of world perception, and a direct consequence of the waiving from conceptual thinking.

Moving away from the stadial (classic) and world-systemic (non-classic) "measurement" of culture and the transition to its consideration exclusively through the prism of "technological orders" (post-non-classical) does not just level the generally accepted and universally recognized ideas about the past and the present, which by default indicates actual waiving historically established forms of culture, but it also demonstrates a "technocratic" approach to understanding the future, in which a person turns from a subject who creates technology as an intellectual product into an "application" of the latter. At the same time, the apologists for the technocratic approach do not at all take into account that with the advent of the "historical" moment when a person stops creating technologies, he or she will not only understand them, but also manage them. In other words, with the removal of man from the technological process, mankind loses the opportunity to predict the future. The loss of the hypothetical opportunity to predict the future, in fact, will deprive humanity of the very future.

Meanwhile, while culture was understood as "a combination of material and spiritual values, life ideas, behavioural patterns, ideals, norms, methods and techniques of activity, embodied in subject media and transmitted to subsequent generations" (Rozov, 2010), it performed the same function as "hereditary (genetic) information for a living organism" (Rozov, 2010); the present acted as a "reflection of the past" with the preservation of historically established life goals and meanings; science was "measured" by rationality; axiological and cognitive principles gained value in cognition.

As science understood as a "spiritual-cognitive" activity, the goal of which is knowledge, acquired a "status of reliability", there has been grown the value of 1) the philosophical and worldview dimension in science and 2) the cognitive "potential" of scientific knowledge, and 3) philosophical "loading" was determined by the depth of penetration into the essence of the objects of study. Despite the independence of individual branches of scientific knowledge and the specific diversity of their logical and conceptual design, in the pre-industrial era they were united not only by a "common" object (description of the world) and the unity of functions, but also by the structure of knowledge. Division of science into natural and social-humanitarian branches of knowledge at the end of the 19th century became only a formal prerequisite for rethinking the purpose and meaning of scientific and cognitive activity. Giving the "human dimension" to cognition not only puts an end to the "confrontation" between the axiological and the cognitive in scientific knowledge, but also became a sign of the entry of the industrial era into the period of "maturity" (XX century) (Sullivan, 2020).

Since the axiological (humanitarian knowledge) and cognitive (natural sciences) "load" of different forms of scientific knowledge depended on the object being studied (man or nature), the world outlook component of the latter was fixed in their own "formats" for the mastering of reality, which determined the style of thinking and constructed the scientific picture of the world as a "world pattern" (Orudzhev, 2004) in specific historical eras.

The “style formation” of thinking as a “system of logically verified concepts” (Savrusheva, 2008) in scientific cognition was determined, on the one hand, by worldviews prevailing in concrete historical periods about the world and the ways of cognizing it, and on the other hand, by the “categorical structures” of conceptual thinking, having appeared at different stages of the dynamics of “branch” scientific knowledge. In accordance with them, a worldview and value interpretation of “sectoral” scientific categories was formed. If, according to Born, the style of thinking represented “the philosophical face of the era that determined its cultural foundations” (Born, 1963; Martynova, 2020), then the “technocratic” style of thinking in the post-industrial era is striking in its striving, in the spirit of globalization, for one-dimensionality and linearity, which suggests the revival of “mechanicalism” in the implementation of logical procedures, but in a new “technocratic” dimension. This should also include the reduction of the value problem to a purely methodological problem, which not only sends science to the level of empiricism, but also contributes (the problem of “factual consensus”) to the distortion of historical facts (Laudan, 1987; Sullivan, 2020) and archaization of (scientific, social, political) consciousness.

4. CONCLUSION

If we act in the spirit of the opposite trend, then we should talk about “building up” the methodological “resource” of science, in which the cognitive (personal) “aspect” of cognition should not only be present without fail, but sequentially grow. And this means that the Western scientific community must take for granted the influence of axiological orientations on the content and dynamics vector of modern scientific knowledge. But, as practice shows, the “new technocratic wave in the West” (Grant, 1986) of the post-industrial era demonstrates the waiving from the axiological and the cognitive in cognition, which only brings closer the onset of the Toffler “super-industrial” era as the era of post-culture, post-science and post-human.

It makes sense to turn to the history of understanding the culture-historical process and the place of a human in it. Until the middle of the XIX century, socio-cultural processes were considered mainly through the prism of the natural sciences. In particular, from a mechanistic point of view, a human who was taken outside the framework of social relations was regarded as a “perpendicular crawling machine” (Lametri), and from a biological point of view, as a biological creature.

A new understanding of man and his social (as cultural) life appears only in the second half of the 19th century. The aforesaid is explained by the fact that it is precisely during this period that social and humanitarian knowledge acquires scientific status. The philosophical substantiation of social and humanitarian knowledge has been received in various concepts:

- Neo-Kantianism (Rickert, Windelband);
- Positivism (Comte, Spencer), who studied society and the problem of human interaction with "society";
- A historical and materialistic concept of understanding a person and society, within the framework of which a person as a social being is formed in the course of labour activity in interaction with community members, thus building social relations with them. Thus, a person acts as a creator not only of himself, but also of the socio-cultural world, thereby extending the “creative approach” to the transformation of nature;
- The development of the idea of Progress, originating in the age of Enlightenment, the driving force of which is man as the mover of history.

The strengthening of the relationship between the forms of scientific knowledge and the philosophical foundations of science is found in increasing the role of axiological and epistemological factors in the genesis of theoretical knowledge. This objective circumstance manifested in the integration and interpenetration of scientific and philosophical knowledge, is reflected in the worldview attitudes, the scientific picture of the world and the thinking style of the entire twentieth century. The result of this “integration” is general scientific knowledge, which through interpretation and concretization increases its value.

Based on the foregoing, it can be stated that it was the beginning of the “deindustrialization” process at the late 20th century when, paradoxically, the “technocratic” dimension of the post-industrial future comes to the fore. When "technocratic" thinking becomes dominant, the attitude is changing not only to man (“dependent”) and society (“dictator”), but also to “nature” (exhaustion of resources). Therefore, when the question is a new, fourth technological order (which, in addition to digitalization, robotics, and AI, includes also nano- and biotechnologies, the design of living, bio- and cybermedicine, etc.) as a “new technocratic wave," a new understanding of Progress comes to the fore

excluding a person as a leading link from the technological chain. In its specific embodiment, dropping a person from a technological process in which human intelligence is not in demand, in fact, deprives the technical Progress of the human dimension.

"Substitution" of man by technology turns into a problem of paramount importance: the very fact of exclusion of man from the process of invention as a creative process aimed at solving complex technical problems (AI), from planning (AI) and production (robotics), means, in fact, waiving from “Scientific and political” forecasting of the future, taking into account cultural and historical experience, which is the ideal end to Human existence.

In fact, if we ignore the indisputable fact that it is human who creates the images based on which “concrete historical” world pictures are built, and AI is aimed only at recognizing the latter, then the exclusion of human from the “cultural-building” process of the future means not only a change in the world order, but also, according to the figurative expression of Fukuyama, the real end of history, with all the ensuing consequences for culture, science and man.

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