

# PHILOSOPHICAL BASIS OF A NEW HUMANISM IN THE POSTNONCLASSICAL TRADITION

Rafail A. Nurullin<sup>1</sup>

<sup>1</sup>Kazan Federal University, 18 Kremlyovskaya street, Kazan 420008, Russian Federation

<sup>1</sup>nurulla958@mail.ru

Received: 14 Feb 2020 Revised and Accepted: 25 April 2020

**ABSTRACT:** The goal of this study is to show the importance of humanist ideals in the modern civilization. In the world of global interconnectedness, human agency is becoming global as well. Armed with the achievements of the civilization, people can use their abilities for both creative and destructive purposes, which sets high standards for their personal qualities. This necessitates systematic research into the relation between culture and civilization. For a long time, the system theory has developed in opposition to the mechanistic theory and to reduction of system integral properties to emergent. Such a tendency of reflection of social system phenomena inevitably results in a person's alienation from the society, which has reached a global scale in a person's everyday existence. The main method employed in this study is dialectic which permits to speculatively construct any system using the language of universal categories. We also applied general scientific methods of the system theory, cybernetics, synergetics and philosophy of virtual reality. The reflection of the social system development has shown that belittling personal qualities in the society and treating human existence merely as a dependent agent of social relations leads the mankind: to intellectual and moral deterioration of an individual, on the one hand, and to the escalation of and inability to solve the humanity's global problems, on the other. The study in general shows that all the main problems of an individual reside in the discrepancy between the level of spirituality in the society and the level of production and consumption of comforts of civilization. The establishment of the new humanism is a necessary prerequisite for creation of a technologically advanced global civilization based on tolerance and mutual respect for all cultures existing on Earth.

**KEY WORDS:** system, individual, society, culture, civilization, humanism, synergetics, philosophy of virtual reality

## I. INTRODUCTION

The modern world is becoming an increasingly interconnected system of relations between different agents of the society. The invention of the Internet accelerated the establishment of the global civilization dramatically, but the relationships between different cultures often show tendencies opposite to integration – cultural differentiation. The ideals of scientism, based on the belief in unlimited possibility of science to solve all social and cultural problems of mankind, have failed. The development of the civilization at the global scale governed by the ideals of consumerism has led the world to the threat of: global social issues, on the one hand, and total alienation of an individual and his or her reduction to an anonymous agent with herd mentality, on the other. All these phenomena rehabilitate the concepts of a dignified personality who is not merely an obedient cog in the system but an active agent capable of self-reflection and striving to actualize his or her unique talents for the good of mankind. Integral properties of systems, including social systems, consist of sub-integral, integral and meta-integral characteristics. For a long time, the theory of systems, regulatory and self-regulatory systems has developed in opposition to the mechanistic theory, which has led to the importance of the system structure in the reflection of society and, as a result, to elimination of the importance of an individual. The modern world calls for a new humanism based on people with planetary consciousness.

## II. METHODS

The methods of study are based on a dialectic that makes it possible to create speculative constructions of complex multi-dimensional objects as identities of oppositions. Based on the assessment of philosophies of the past in the development of social systems, categorical framework of philosophy allows to make adequate predictions about

the possible development of the mankind in the future. The study also employed general scientific methods and principles: of correspondence, complementarity, systematicity and synergy which allow to view the world as a multilevel self-evolving system of vertical and horizontal relations. We have also used the method of idealisation to create speculative constructions in the most abstract form. Idealisation allows to reduce the variety of actual social processes that occurred over the long human history to a single integral which conceptually reflects the significant aspects of the actual history. Awareness of the necessary aspects of social development can give mankind a robust tool to control their future which is much needed in the face of global risks.

### III. RESULTS AND DISCUSSION

The modern stage of the human history is truly an era of systemic thinking [Kornai, 2002, pp. 2-22] which has gone a long way from the mechanistic theory of Renaissance and its evolution in the modern period and the Enlightenment to synergy and philosophy of virtual reality of the late XX century.

Renaissance made the first step in viewing systematicity as a mechanism of reflection of social dynamics and the social role of individual as a creative personality. The vertical hierarchy of relations "God→man→nature" of the medieval ontology based on the authority of Plato and Aristotle gave way to horizontal, pantheistic and aesthetic relations: "God=nature=man". God has lost his transcendence and become cognizable through the mysterious and aesthetic reflection of the soul of His masterpiece – nature – through alchemy, magic and art. For that purpose, an individual has started to be seen as potentially endowed with all of His attributes and being able to discover and actualize them. Treating an individual as a microcosm of the Cosmos, Renaissance started to see universality as the ideal personality. Humanist ideas as the ideals of anthropocentric philosophy of Renaissance have led to the formation of the mechanistic worldview. The mechanistic theory views the properties of the whole as a mere qualitative sum (superposition) of the properties of its parts [Petushkova, 2001, pp. 634-635]. Renaissance started to profess these mechanistic ideas as the crowning achievements and values of the time to the entire society. Following this approach, the quality of individuals made up the quality of the society in general. For this reason, the era of Renaissance (represented by T. More, T. Campanella and others) became the source of many utopian ideas of the perfect society [Kolesnikova, 2013, pp. 141-250]. Further development of humanist principles in the society was associated with the formation of modernism as a culture of the emerging industrial civilization based on the achievements of science. Modernism has declared itself an era of reason and encompassed modern and contemporary history. Indeed, F. Bacon and R. Descartes – the first modernists – set a new colossal goal for the mankind: with the help of science, to make the man "the master over nature" [Mironov, 2016, pp. 86-110]. Thus, the main idea of modernism is the practical application of science. Descartes develops the concept of rationalism and shapes key ideals and values of the Western civilization. He promotes the idea of culture based on reason and science instead of religion. The XVII century saw rapidly increasing importance of science, the first Scientific Revolution (the development of classical ideals of scientific rationalism) and the beginning of scientific and technological progress [Dmitriev, 2012, pp. 20-58; Hatch, 1989, pp. 34-39].

The French Lumières of the XVIII century further enhanced the authority of reason and science; popularized the humanism of Renaissance; they built a concept of a new society centered around humanist principles, ideals and values, such as: freedom, equality, justice, reason, progress etc. An important quality of this movement was futurism (a radical estrangement from the past and aspiration for a "brighter future"). The primary means to an ideal society (brighter future) were education and enlightenment of an individual. In other words, the achievement of the perfect integrated world was seen mechanistically, i.e. through the perfect man [Mezhuev, 2001, pp. 35]. The key role in this was to be played by reason, its development and human unlimited possibility of self-perfection. The Lumières project of modernism was comprehensive with a new religion of its own (scientism) that celebrated the human reason and progress [Condorcet, 1936, pp. 227-228]. The Lumières saw their program as universal. Due to the progress of reason and education, their ideals and values were to pervade the entire world as all people have the same nature and intelligence. They believed that reason will solve all social problems: science as an epitome of reason will rationally explain natural laws; the conquest of nature will provide unlimited wealth; science will shed light on interpersonal relations which will result in a formation of a new society based on freedom, brotherhood and justice; science will help people know themselves and consciously and rationally control their actions.

But, the beginning of the XIX century has shown that bourgeois capitalist society is far from modernist. Generally, both XIX and XX centuries have proved that the ideals of the Enlightenment were corrupt. The expansion of Western values occurred not through education but through imposition and violence; the two world wars have brought the very idea of humanism into question. Theory-wise, mechanistic philosophy applied to social processes was subject to criticism, which has led to structural understanding of the natural systems. Contemporary thinkers started to foster the idea of non-linearity of social development which in turn resulted in the formation of a new systemic thinking. The first step to understanding the systematicity of scientific thinking was made by I. Kant. He

was the first to propose the idea of the development of the Solar system and other stars [Narskiy, 1976, pp. 86-116], as well as the development of moral values [Kiselyova, 2008, pp. 19-37]. Kant has accomplished a shift in philosophy from metaphysics of substance to conceptual construction of cognitive abilities of an individual. He has shown the unique role of transcendental thinking in achieving the systematicity of knowledge in the formation of preception, sense and intelligence [Gaidenko, 2011, pp. 266-287]. All these cognitive characteristics of a subject make the knowledge systemic which is the main feature of scientific thinking. The ideas of systemic thinking were then further developed within idealistic German classical philosophy [Gulyga, 2001, pp. 41-162], and materialistic philosophy of K. Marx and F. Engels [Mironov, 2016, pp. 164-175]. Although Kant managed to synthesize the empirical and theoretical levels of knowledge, he had to coin two vague notions for this purpose – "things in themselves" and "a priori intuitions". However, Kant's notion of a priori knowledge lacked sufficient justification and J. Fichte, F. Schelling and G. Hegel criticized it. German classical philosophers tried to explain the possibility of intuitive activity of the human "self" through the phenomenal activity of the *Weltgeist* ("world spirit"). According to Hegel, the development (emergence of new forms) occurs because the world of abstract concepts of the Absolute Spirit is contravercial and follows the formula: thesis, antithesis and synthesis. On this basis, Hegel has elaborated the concept of systemic development of the history of mankind. He saw the formation of the objective spirit (historical and cultural development) as derived from the movement of abstract concepts of the Absolute Spirit towards the Absolute Idea in the process of perceiving the Absolute Truth. Marx has adopted Hegel's dialectics to describe the active matter and developed the concept of natural development of the society [Bryan, 2006, pp. 268-270]. According to Marx, everything in the society is the result of conscious purposeful actions and relations of people themselves but capitalism alienates them from the results of their work.

The common ground between the contradictory worldviews of Hegel and Marx is the systemic approach that has developed in opposition to the mechanistic philosophy of the Enlightenment, which has led to the absolutization of the emergent properties of the systems of nature and society. This, for a example, has made the problem of the person's alienation from the world, society and other people insolvable within Marx philosophy. The systemic approach changes the perception of time. Time, or rather, the processes in time, are no longer directional as it used to be for the medieval philosophers; neither it is a linear progression of nature and society as the philosophers of Modern Era and Enlightenment used to believe; on contrary, it reflects the non-linear spasmodic character of processes [Nurullin, 2016, pp. 123-132]: of both social development in Marx formation theory [Grodsky, 2016, pp. 183-200] and Engels's systems of nature [Sychev, 2016, pp. 63-67]. It has become clear that the holistic properties a system are defined by its structure, not by the properties of its parts [Bogdanov, 1995, pp. 271-275]. In social organization, the highest priority was given to the emergent characteristics of the system, which at the same time has eliminated the importance of its constituents. The minds of scientists and philosophers started to be dominated by the idea of superiority of social values over personal ones. An individual started to be increasingly viewed as a mere agent of the structure of social relations in which (s)he was involved according to his or her economic activity, background, class status etc. [Mitin, 1979, pp. 235-244]. In XX century Russia, the Marxist theory of social change became an ideology, and, after the phase transition in the society, the role of the individual was reduced to conscious consistent illustration of objective laws discovered by Marx [Stalin, 1924]. The idea of a person's alienation from the society as a result of the pressure the system puts on its parts has had a profound impact on the European philosophy as well [Shlomo, 1994, pp. 92-93]. The dominance of political ideology threatened to turn personality into an unit of the mass. It was at the turn of XIX-XX centuries that G. De Tarde [Tarde, 1999, pp. 14-18] and G. Le Bon [Le Bon, 2011] began to raise the problems of the masses in their work, which were further elaborated by J. Ortega [Ortega y Gasset, 2003], S. Moscovici [Moscovici, 1985], E. Canetti [Canetti, 2014], J. Baudrillard [Baudrillard, 1970] and did not lose their acuity in the age of information. Individual cultural values of a person (faith, hope, love, friendship, good, truth, beauty, life, freedom etc.) started to be viewed through the prism of the dominant political ideology of the time as the biggest narrative, i.e. a theoretical relation of history with a pre-known result, which made the story ideologically whole [Alexanian, 2006].

At the beginning of the XX century the concept of systems started to permeate natural sciences, as is shown by the works on system theory of V. Bogdanov [Rudy, 2012, pp. 92-95] and L. von Bertalanffy [Bertalanffy, 1956, pp. 1-10]. The system theory has given impulse to the interdisciplinarity in science. At the end of 1940s, the system theory gave rise to cybernetics, a regulatory system theory of N. Wiener [Wiener, 1948] and 1980s saw the emergence of synergetics, a theory of self-regulatory systems developed by H. Haken [Haken, 1978] и I. Prigogine [Prigogine and Stengers, 1984]. The achievements of interdisciplinary science resulted in the formation at the end of the XX century of a new postnonclassical ideal of rationalism which has become an indispensable feature of every scientific worldview [Stypin, 2011, pp. 163-207]. Synergetics has shown the creative power of the random in formation of the new in both real world and cognition.

Synergetics as a theory of self-regulation describes the development of open non-linear systems in dissipative environments, where the environment itself is a self-regulatory system of a higher rank that has its own space and

time and immanently determines the pattern of development of its constituent sub-systems. The necessary prerequisite of self-regulation is free energy, hence, a large system must not only develop but destroy at the same time. Indeed, expanding exponentially, thermodynamically our Universe approaches the maximum of its entropy [Joshi, 2007]. The destruction of the system is caused by the growth of entropy (chaos) which defines the level of hierarchy, i.e. free (unbound) energy. But at the same time, the overall growth of entropy provides an opportunity for the development of biological species, mankind and, perhaps, more complex intelligent systems than those that exist on Earth [Nurullin, 2016, pp. 123-132].

The emergence of self-regulatory systems on our planet is related to the emergence of living organisms capable of reproduction, i.e. of continuous exponential production of structures of their own kind, which in turn creates its own level of non-hierarchy. New structures can then appear based on the existing level of non-hierarchy etc. [Khakimov, 2007, pp. 32-52]. The exponential production of more and more new species sooner or later comes to a contradiction with energy resources of the environment, which in turn creates competition among the species with similar needs. The results of reproduction by living organisms of structures of their own kind is not strictly homogeneous but contains slight deviations due to mutations. Maintenance of the slight heterogeneity (fluctuations) in a homogeneous species is necessary for this species to survive in the changing environment. Mutations occur due to inbreeding. The species survival is achieved through rejection (natural selection) of individuals who are unable to adapt to the changes in the environment [Futuyma, 2005].

For several reasons, *homo sapiens* has managed to override biological adaptation to the environment. Due to the social character of its existence and consciousness, mankind creates its own environment. The synergetic dependence on energy and food does not disappear with the emergence of people but it becomes inferior to other, more effective factors of human development, i.e. the ability of people to process (reflect and find meaning in) information using mental energy derived from their emotions. People exist not due to biological adaptation to the environment but due to its active transformation based on creative reflection of the surrounding world and their relations with it. As these relations become more complex and the human consciousness develops, the more independent people become from the natural forces until, at a certain level of development, they are able to create a civilization – an artificial environment. Slowly and gradually at first, and then non-linearly and exponentially (due to scientific and technological progress), an individual becomes immersed into a rapidly changing artificial world. Today, a person in his or her individual existence must adapt not to the natural environment but to civilization. Adaptation to civilization does not involve physical elimination of unfit individuals as in biological evolution but rather intellectually rejects irrelevant concepts by forgetting and re-evaluating the old ideas and creating the new ones.

Having overcome biological evolution, *homo sapiens* was able to populate the entire planet. The neural network of the human brain allows to perceive human cognition as a "black-box". The concept of the "black-box" has originated in cybernetics where it symbolizes both the possible "everything" and real "nothing" [Ashby, 1959, pp. 127-169]. The ability of people to organize their inner world in every imaginable way allows them adapt to any kind of environment existing on Earth while maintaining their biological invariance. Thus, an individual can live with any cultural code whose range is determined by initial conditions that have been long established in a given part of the world. Due to the natural diversity of habitats existed in the past as well as the history of intercultural relations, the Earth is now a patchwork of cultures. Just like the matrix of consciousness (the brain) allows for an unlimited intellectual and spiritual development of people while being a biologically limited species, the Internet as a matrix of information era must become the structure for further development of mankind with people being aware of energy limitations of the planet in the time of globalization.

Synergetics declares that new levels of organization form through the chaos of relations between internally organized units. Synergetics is a theory of self-regulatory systems which, using the principles of complementarity, chance and necessity describes the self-regulation of open systems as a non-linear process in dissipative environments. The role of chance in the system development is receives a completely new interpretation. For example, at the dawn of mechanistic theory, the priority was given to the principle of necessity as is vividly illustrated by Spinoza's pantheism. According to Spinoza, nature was fatally pre-determined by the necessity [Spinoza, 1994, pp. 585-697] following the Laplace's determinism that precluded any randomness. The random was seen as a lack of knowledge [Maistrov, 1967, p. 294]. In postnonclassical tradition, chance is treated as a singularity formed by the intersection of many potential necessities, which, under certain circumstances of system evolution near a bifurcation point, can determine the necessary asymptotic progression of the system towards a new relatively stable state – attractor etc. The concept of chaos plays a truly important role in synergetics as it is this concept that it treats in a radically different way. Giving a new reading to chaos, synergetics changes the scientific understanding of the development of systems [Prigogine and Stengers, 1984, p. 150-180].

In synergetics, self-regulation of systems within a bigger system is achieved through formation of multiple levels of non-hierarchy far from thermodynamic equilibrium of similar structures established in the past. Influenced by

the changes in the surrounding world, a system generates more and more perfect structures of its own kind and constantly adapts its components to the changes of the bigger system. Each time, this base of new components starts to organize itself, launching the progression of the system towards qualitatively new states etc.

Virtual philosophy has created an even more complex multi-dimensional system of hierarchical and non-hierarchical relations and declared the existence of different levels of being. These levels of the hierarchy that form horizontal free (unbound) relations to generate new organizational structures also form vertical top-down relations in which different levels interplay and the upper levels determine the existence of the bottom ones. At the same time, each level is autonomous and defines its space and time independently [Nosov, 2001].

These theoretical concepts can be applied to many social processes. There are thousands of relatively autonomous cultures in the world which coexist horizontally as equals. The baseline is the natural conditions which vary and depend on climatic characteristics of the area where a certain culture emerges and develops. Civilization that develops in dialectical rejection of nature by culture, urbanizes the human environment and tries to reduce all cultural structures involved in the process of civilization to global similarity. The development of civilization has created the Internet that, in turn, has changed agency of an individual. Due to ethical, aesthetic and intellectual qualities of his or her personality, every person now has an equal opportunity to position himself or herself in the information environment shared by the entire mankind. Both positive and negative expression allows people to see themselves, as if in the mirror, the way they are and identify for themselves certain ethical and intellectual critical criteria. The universal availability of the Internet helps expose previously hidden flaws of an individual and the society which is a necessary condition for overcoming them by means of collective evaluation. Providing an average person with the chance to reach out to the world, the Internet creates an illusion that he or she can overcome alienation. People are conscientious (able to intuitively know good from evil) and collective blaming of negative statements on the Internet must lead to moral refinement of a human's soul. All this lays the basis for the development of new humanism.

Thus, each level of social organization based on the previous non-hierarchy creates a new non-hierarchy larger than the original one. Over its history, the mankind has passed several levels of non-hierarchical attitude to the sacred: ritual (in Classical antiquity), God (Middle Ages) and right (modern and contemporary history). Nowadays, the level of non-hierarchy as equal opportunities is defined by the Internet that has reached a planetary scale. Each such level of equal opportunities as a result of previous social development raises the mankind to a new level of humanist relations which impose qualitatively new requirements to an individual's personality. Global urbanization caused by the development of civilization and based on the cult of production and consumption of money and material goods not only corrupts the idea of a dignified personality but also escalates global problems.

The replacement of the basic structure of the mankind together with the escalation of global problems create the necessary prerequisite for civilization to reach a new level of existence. The entire mankind has approached a point of bifurcation (point where the "trajectory" of system development splits into two which emerges when chance can radically change the past necessity that the system obeyed) which has foregrounded the role chance in the modern world. As a result, the influence of random factors in society is rapidly increasing. In a today's energy-rich world even unintentional, let alone deliberate actions of individuals following a certain ideological principles, can threaten the integrity of the entire society. The Internet accelerated globalization dramatically. Civilization seeks integration based on the common good, while cultures tend to differentiation. The key problem of the modern society is inconsistency between values of different cultures. This is the problem that postmodernists and poststructuralists are trying to address. For example, according to G. Deleuze, the current state of the information society threatens to turn the world into chaosmos if it stands by the ideals of capitalism [Deleuze and Guattari, 2007, pp. 111].

The Earth, however big it is, is relatively limited in space and time, and sooner or later, the human civilization of the planet will inevitably approach its attractor. Each new level of sustainable development of the society and humankind is always achieved through dialectical rejection (re-evaluation) of the past. Such a rejection can be either physical or spiritual. Depending on which path the mankind will take, the civilization has two extreme scenarios of the future. The first one is to physically disappear from the planet and return to the original primitive state like an animal super-organism who failed to face the challenges of the modern world and adapt to its changes. If the mankind remains in the capitalistic framework of relations, it is doomed. The ideology of business relations reproduces the cult of production and consumption of material goods which exhausts the planet resources, alienates people and consequently does not contribute to the formation of a moral personality. The second path is a path of culture which will raise the mankind to a higher spiritual level of existence on this planet. It is post-modernism and information era that bring about the opposition of cultures and economic systems. Whichever side wins, will define the social forces and relations that contribute to the survival of the mankind in general but will help it achieve a new level of cosmic existence based on the synthesis of cultures.

In a global civilization, the mankind is vulnerable to accidental mistakes and intentional and unintentional actions of individuals (for example, acts of single terrorists, hackers or ill people). In the time of unpredictable relations and actions of society agents, the government strengthens its structures whose power has little effect in the energy-rich world of wide possibilities of individuals. In theory, top-down government based on the past achievements of civilization must be combined with additional bottom-up management tools. The latter requires a personality capable of self-regulation based on the belief in the importance of moral values in the relations between people, society and nature. Contrary to this view, the modern civilization uses mass media to promote material wealth as the highest value of civilization. Synergetics as a modern system theory shows the futility of search for truth based on first theoretical absolutization of and then on the attempt to achieve the extreme points of systemic integrity of the society. While top-down absolutization of cultural values leads to the establishment of political ideology and material poverty of agents of the society, the cult of material wealth results in moral poverty of these agents and escalation of global problems. The root of all evil of the modern society lies in the inconsistency between the level of personal morality and the level of production and consumption of material goods of civilization. In today's axiological imbalance, only a new humanism can meet the demands of the modern world by forming a (self)reflecting personality. Recent observations show that organizational measures alone can not solve today's global problems. Vulnerability of the government structures in the face of terrorism, hackers and chance in general signals the need to return to the cult of moral values of every person. This revives the humanist ideals of an intelligent, self-reflecting, creative and responsible personality of the past in new environment of information civilization.

#### IV. CONCLUSION

The systemic thinking has a long history that dates back to the beginning of mechanistic philosophy in Renaissance. The use of mechanistic ideas to explain the structure of the cosmos and society has led the greatest minds to the ideas of humanism. Mechanistic philosophy further developed during the Enlightenment on the basis of science and education. The contemporary history realizes the limitation of the mechanistic approach in explaining social processes. Mechanistic ideas are opposed to emergent characteristics of systems. Within this approach, the system started to be determined not by the quality of its constituents but by its economic structure. Absolutization of emergent characteristics in reflection of social systems with no regard for the interests, desires and qualities of an individual has proved to be limiting as well and led to insolvable alienation of an individual from the society. Synergetics as a theory of self-regulation reveals the importance of mechanistic relations through the reflection of chaos for further integrated development of the system. Chaos is started to be perceived not as a lack of knowledge but as a necessary prerequisite of non-hierarchical relations between sub-systems internally organized within the previous hierarchy. This level of non-hierarchy of elements as a result of the past organization can create new structures in dissipative environment and form better organized systems. Such ideas allows to restore the importance of mechanistic relations in self-regulatory systems at a new level. In the development of social systems, mechanistic philosophy manifests itself in the form of humanism. For a dignified existence of a personality and mankind in general, information civilization must rely on the modern humanism that prioritizes the development of moral values in every person, not the cult of inevitably limited material wealth. The development of systems through the alternation of non-hierarchical and hierarchical relations at an increasingly greater scale has resulted not only in the more complex global levels of relations between people but also in imposes certain requirements to the personality of every individual capable of facing the challenges of the modern world with dignity and acting as a co-creator of this global process.

#### V. REFERENCES

- [1] Alexanian E.A. Les innovations du style narratif du XX siècle // TRANS. Internet-Zeitschrift für Kulturwissenschaften / E.Alexanian – Erevan / Vienne: Juli, 2006. – No.16. [Electronic resource] – [http://www.inst.at/trans/16Nr/05\\_1/alexanian16.htm](http://www.inst.at/trans/16Nr/05_1/alexanian16.htm)
- [2] Ashby Ross W. (Эшби Росс У.) Глава 6. Чёрный ящик // Введение в кибернетику = An Introduction to Cybernetics. – Издательство иностранной литературы, 1959. – 432 с. – С. 127-169.
- [3] Baudrillard Jean. La société de consommation. Ses mythes et ses structures. Paris, S.G.P.P., 1970, 304 p.
- [4] Bertalanffy L. von. General System Theory. // General Systems. Vol. I. – 1956. – pp.1-10.
- [5] Bogdanov A.A. Socializm nauki: Nauchnye zadachi proletariata (Socialism of science: scientific objectives of proletariat). Sb.: Russkij pozitivizm: Lesevich, Yushkevich, Bogdanov (Collected works:

- Russian positivism: Lesevich, Yushkevich, Bogdanov). Ed. by S. S. Gusev. Saint Petersburg: Nauka Publ., 1995, 362 p., pp.271-275
- [6] Bryan S. Turner. The Cambridge Dictionary of Sociology. (Ed.) – Cambridge University Press, 2006. – pp.268-270.
- [7] Deleuze G., Guattari F. Anti-Oedipus: capitalism and schizophrenia. Translation from French and Afterword by D. Kravchuk; Ed. by V. Kuznetsov. Yekaterinburg: U-Faktoria Publ., 2007, 672 pp.
- [8] Dmitriev I. Sociokul'turnye osnovaniya intellektual'noj revolyucii XVI-XVII vv (Socio-cultural basis of intellectual revolution of XVI-XVII centuries). Politicheskaya konceptologiya (Political conceptology), 2012, No. 1. (January-March), pp.20-58.
- [9] Futuyma D.J. Evolution. – Sunderland: Sinauer Associates, 2005. – 543 p.
- [10] Gajdenko P.P. Immanuel Kant: ot substancii k sub'ektu, ot bytiya k deyatel'nosti (Immanuel Kant: from substance to subject, from being to action). Istoriya novoevropejskoj filosofii v ee svyazi s naukoy (History of modern European philosophy and its relation to science). Moscow: Knizhnyj dom Publ., 2011, 376 p., pp.266-287.
- [11] Grodskij V.S. Razvitie osnovnykh idej ehkonomicheskoy teorii (The development of key ideas of economic theory). Moscow: Research Center RIOR, Research Center INFRA-M, 2016, 464 p., pp.183-200
- [12] Gulyga A.V. Nemeckaya klassicheskaya filosofiya (German classical philosophy). Moscow: Rol'f, 2001, 416 p., pp.41-162
- [13] Haken H. Synergetics. An Introduction, Springer, Berlin, 1978.
- [14] Hakimov E.M. Dialektika ierarhii i neierarhii v filosofii i nauchnom znani (Dialectics of hierarchy and non-hierarchy in philosophy and science). Kazan: Fan Publ., Tatarstan Academy of Sciences, 2007, 299 p., pp.32-52
- [15] Hatch Robert A. The Scientific Revolution: Paradigm Lost? - University of Florida / OAH History of History, 4, 2 (1989): 34-39.
- [16] Joshi P.S., 2007. Gravitational Collapse and Spacetime Singularities. – Cambridge University Press. 273 p.
- [17] Canetti Elias. Masse und Macht. AHA-BUCH GmbH (Einbeck, Deutschland) 2014, 592 p.
- [18] Kiseleva M. Antropologiya kak disciplinarnoe znanie: prakticheskaya tochka zreniya Immanuila Kanta (Anthropology as a discipline: Immanuel Kant's practical point of view). Chelovek vchera i segodnya: mezhdisciplinarnye issledovaniya. Vyp. 2. / Ros. akad. nauk, In-t filosofii (Man yesterday and today: interdisciplinary studies. Vol. 2. / Russian Academy of Sciences, Institute of Philosophy). Ed. by M.S. Kiseleva, Moscow: IFRAN Publ., 2008, 264 p., pp.19-37
- [19] Kolesnikova A.V. Filosofiy ehposhi Vozrozhdeniya: zhizn' i idei: ucheb. Posobie (Philosophers of Renaissance: biographies and ideas: textbook). Novosibirsk: Novosibirsk State Agrarian University, 2013, 328 p., pp.141-250.
- [20] De Condorcet J. Sketch for a Historical Picture of the Progress of the Human Mind, Moscow, 1936, pp.227-228.
- [21] Kornai J. The system paradigm. The problems of economics, 2002, No. 4, pp.4-22.
- [22] Lebon G. Psihologiya narodov i mass (Psychology of peoples and masses). Moscow: Akademicheskij proekt Publ., 2011, 238 p.
- [23] Majstrov L.E. Teoriya veroyatnostej: istoricheskij ocherk (Probability theory: a historical outline). Moscow: Nauka Publ., 1967, 320 p., pp.294.
- [24] Mezhuiev V.M. Kak vozmozhna filosofiya kul'tury? (How is philosophy of culture possible?). Sb. st. Ot filosofii zhizni k filosofii kul'tury (Collected articles: from philosophy of life to philosophy of culture); Ed. by V.P. Vizgin. Saint Petersburg: Aleteiya Publ., 2001, 395 p., pp.35.
- [25] Mironov V.V. Filosofiya: Uchebnik (Philosophy: textbook). Moscow: Yur.Norma Publ, Research Center INFRA-M, 2016, 928 p.

- [26] Mitin M.B., Gajdenko P.P., Davydov Yu.N. Lichnost' v XX stoletii: Analiz burzhuaznyh teorij (Personality in the XX century: an analysis of bourgeois theories), Moscow: Mysl' Publ., 1979, 263 p., pp.235-244.
- [27] Moscovici Serge. L'Age des foules: un traite historique de psychologie des masses. Bruxelles: Les Éditions Complexe, 1985, 503 pp.
- [28] Narskij I.S. Immanuel Kant (Immanuel Kant). Moscow: Mysl' Publ., 1976, 208 p., pp.86-116.
- [29] Nosov N.A. Manifest virtualistiki (Manifesto of philosophy of virtual reality). Moscow: Put' Publ., 2001, 17 p., (Works of the laboratory of philosophy of virtual reality. Vol.15.).
- [30] Nurullin Rafail Asgatovich. Metaphysical foundations of physics. European Journal of Science and Theology, June 2016, Vol.12, No.3, 123-132. (ISSN18410464-Romania-Scopus, 00, 911224). [Electronic resource] – [http://www.ejst.tuiasi.ro/Files/58/Contents%2012\\_3\\_2016.pdf](http://www.ejst.tuiasi.ro/Files/58/Contents%2012_3_2016.pdf)
- [31] Nurullin Rafail Asgatovich. Multicultural Existence of Humankind in Conditions of Developing Global Civilization and Acceleration of Historical Rhythms. Man In India, 2017, 97(07): 179-190 (ISSN00251569-India-Scopus), 249763. [Electronic resource] – <http://www.serialsjournals.com/serialjournalmanager/pdf/1496124986.pdf>
- [32] Ortega y Gasset J. Vosstanie mass (The Revolt of the Masses). Moscow: AST Publ., 2003, 245 p.
- [33] Petushkova E.V. Mekhanicizm (Mechanicism). Vsemirnaya ehnciklopediya: Filosofiya (World Encyclopedia: Philosophy); Ed. by A.A. Gricanov. Moscow: AST, Mn.: Harvest, Sovremennyj literator Publ., 2001, 1312 p., pp.634-635.
- [34] Prigogine Ilya, Stengers Isabelle. Order out of chaos. Man's new dialogue with nature Heinemann. London. 1984. 349 p.
- [35] Rudi A.Sh. Teoriya ravnovesiya kak mekhanizma ustojchivosti (Theory of equilibrium as a mechanism of stability). Omsk scientific bulletin, 2012, no. 3 (109), pp.92-95
- [36] Shlomo Avineri. Hegel's Theory of the Modern State. – Cambridge, etc.: Cambridge University Press, 1994. – pp.92-93.
- [37] Sychev A.A. Osnovy filosofii: Uchebnoe posobie (Introduction to philosophy: textbook). Moscow: Alfa-M, Research Institute INFRA-M, 2016, 368 p., pp.63-67.
- [38] Spinoza B., 1994. Ethics. Great Books of the Western World. Chicago; Auckland; London; Madrid; Manila; Paris; Rome; Seoul; Sydney; Tokyo; Toronto, Vol.28, pp: 585-697.
- [39] Stalin I.V. Ob osnovah leninizma (The basis of leninism). Pravda, No. 96, 97, 103,105, 107, 108, 111; April 26 and 30, May 9, 11, 14, 15 and 18, 1924 г.
- [40] Styopin V.S. Istoriya i filosofiya nauki (History and philosophy of science). Moscow: Vysshaya shkola, 2011, 423 p., pp.163-207.
- [41] Tarde G. Mnenie i tolpa (Opinion and Crowd). – Moscow: KSP+, 1999, 149 p., pp.14-18.
- [42] Wiener Norbert. Cybernetics or Control and Communication in the Animal and the Machine. (Hermann & Cie Editeurs, Paris, The Technology Press, Cambridge, Mass., John Wiley & Sons Inc., New York, 1948).