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The concept of knowledge society in the ontology of modern society

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Abstract

The article analyzes the nature of knowledge society. Research opportunities of instrumental reason (M.Horkheimer) and communicative reason (J.Habermas) concepts are compared. Theories of postindustrial society, information society and knowledge society are compared. The article denotes the idea that society transformation projects are the process of expansion of information and communication technologies due to the new role of information and knowledge. Typology of society is presented as defined by the ratio of science and technology. The nature of technoscience is disclosed. Knowledge and information are interpreted as strategic resources of knowledge society. The role of science in the formation of human life and world is developed.

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Keywords: Knowledge society, information society, postindustrial society, technologies, instrumental reason, technoscience, strategic resources;

1. Introduction

Vector of development of modern civilization is focused on project vision of the society that has knowledge and the benefits of high technology as a base. This society is called by analysts Knowledge Society. Study of the nature of the society in question, its characteristics, strategies and technology of transition to this society, - all that can be termed “the ontology of the knowledge society” - is extremely relevant. Received knowledge will help to identify the role and mechanisms of the effect of knowledge on the sphere of social life, to reduce the level and scope of risk-taking in society, to adapt society to the deep transformations, find and optimize the directions and mechanisms of knowledge society development.

2. Subject and research methods

The importance and relevance of developing the concept of knowledge society, the place and status of modern society makes it necessary to refer to issues such as:

- comparative analysis of the theories of post-industrial society, information society and knowledge society;
- study of differences in the interpretation of the role of instrumental and communicative reason (M. Horkheimer, J.Habermas);

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- analysis of technology structural components as an instrumental method of reasoned action, research of knowledge and technology as a base of knowledge society;
- study of the "technoscience" phenomenon as the embodiment of a changed mechanism for implementing technical and scientific knowledge and the transformed functions of science;
- study of the role of risks in knowledge society as having the potential of internal instability.

In the study of the identified problems the author uses the potential of the comparative method, the possibility of an integrated approach, the possibility of a systematic methodology and the method of structural-genetic synthesis.

3. The results obtained

In the 30 years of the twentieth century the paradigm of information society analysis and later (in 1962) conceptualized in the Fritz Machlup monograph "The Production and Distribution of Knowledge in the United States" is formed in the United States. By this time, may refer hot debates, which are based on numerous projects in the transformation of society, focused on the phenomenon of information and communication technologies, on knowledge, that showed its role and importance as a factor of social development. There arises a new sphere - the "knowledge economy". John Naisbitt in his study "Megatrends" writes about this sphere as about large-scale social change: the number of industrial workers is surpassed by the amount classified as "white collars". Earlier, Peter Drucker uses the term "knowledge worker", denoting those who work with knowledge (knowledge workers). And even earlier Richard Lane appealed to conceptual construct "knowledge society": R.Lane used the term "knowledge society" to distinguish between technocracy and expertocracy and drew attention to the transformation of the status role and potential of knowledge in politics and management. In the opinion of D.V.Efremenko (Efremenko, 2010), the reason for this attention is due to the increased discrepancy of incredible progress of information and communication technology, computer technology, information transfer means, computer communication networks and at the same time rather low rates of modernization of the political, legal, social institutions, as previously wrote H. Barnes and J. Gurvich. Rationale for the new status role and potential of knowledge in politics and management with the need of the natural process required the interpretation of the capacity of technical specialists and experts in the formation of new strategies of social control, which is reflected in the construct "technostructure". The interaction of qualified professionals within the boundaries of the technostructure was described by J.K. Galbraith in "The New Industrial State" as an essential prerequisite for effective management. The concept of "technostructure" is reinterpreted by H. Schelsky - the author is known by "the thesis of technocracy". In "Man in the scientific civilization" H. Schelsky writes about the patterns of the new "scientific civilization": technique and science were given the status of legitimating condition of domination, patterns created by man in the process of labor and scientific knowledge were formed. H. Schelsky introduced the term "technical government" – within the term high level of science and technology development narrows the range of possible political decisions (Schelsky, 1965). And in his work "The Coming of Post-Industrial Society: A Venture in Social Forecasting" D. Bell proposed the concept of a society called the post-industrial. D.Bell declares science and knowledge as dominant values of the society, reveals the role of scientific knowledge in the planning and decision-making, analyzes the process of bureaucratization of intellectual activity. A man of knowledge is part of the economic and political elite. Daniel Bell considers that scientific and technical experts compromise with the existing elites sharing with them spheres of influence - Daniel Bell, in fact, is talking about the balance of influence in the actions of experts, bureaucrats, interest groups (Bell, 1973). D.V. Efremenko draws attention to an important detail that reflected the situation during the 1960-1970 periods where analysts in hot debates expressed a sense of fear, aimed at a developing technocratic government, when possibility to prevent the institutions of civil society in decision-making was formed. Among the representatives of the Frankfurt School the most radical ones were M. Horkheimer and J.Habermas - despite the differences of their positions. M. Horkheimer, for example, stands on the position of instrumental rationality, when he says that science serves political purposes, but is for those purposes indifferent; J.Habermas defends the idea of communicative rationality, considering science as a factor of legitimizing domination; scientific politics can significantly reduce social conflicts. And because it is dangerous, one can use the communicative background, communicative rationality, achieving the culture of consent in society, the culture of solidarity. These ideas form the

basis for the work of Jürgen Habermas "Moral consensus and communicative action" as the idea of the role of communicative rationality (as opposed to instrumental rationality) in the formation of deliberative democracy: in its context a dialogue is preceded by a pragmatic decision. D.V. Efremenko, noting incompleteness of debates on communicative rationality and deliberative democracy, quite correctly, in our view, notes that these ideas "... almost completely replaced technocratic component that was present in earlier versions of the concept of the knowledge society" (Efremenko, 2010). He also considers that existing theories of the information society, post-industrial society and the knowledge society – are close theories, they are based on the notion that it was the new role of information and knowledge that influenced society transformation projects have been formed in the past half of the century. Within the range of these close theories theory of knowledge society has a special status. In the monograph "Theories of the Information Society" F. Webster (Webster, 2006) sees the difference between them in the fact that the theories fix different sides of the process of distribution of information and communication technologies, knowledge, and information in the society; according to A.I. Rakitov a version of the knowledge society – is an improved version of Information Society. A.I. Rakitov introduces the concept of "regulative world" as the world of rules that underlie human behavior. As for technology, the author interprets it as Polystructural system, which includes the following structural components:

- technology, "... i.e. artifacts, specially designed for the production, transformation and movement of tangible objects and services;
- natural, manmade, human, financial and other resources needed to create the material phenomena and services;
- goal-oriented activity carried out with the help of technology and the resources listed above (the author calls this activity technological);
- management of this activity;
- information and knowledge, skills and rules necessary for the implementation and management of technological activity;
- institutional and organizational forms to ensure the implementation of technological activity;
- interaction of the components of technological activity and its products with the natural and social environment " (Rakitov, 2005).

Knowledge is the basic foundation of any society - knowledge and technologies based on it. In the context of the civilization that occurs at the turn of XX-XXI centuries, scientific knowledge and high technologies become the basic foundation. And because the process of creation of scientific knowledge and its further objectification in technology dominates among the tasks facing society, the priority of the society development becomes science. Knowledge acquires the status of "information goods" (J. F. Lyotard), becoming the most significant rate in the struggle for power. It is notable that the ratio of science and technology is the fact that defines a typology of societies today. In the interpretation of A.I.Rakitov this typology is as follows:

- societies producing all the necessary scientific knowledge, high technology, knowledge-intensive artifacts and services for life and development;
- societies, creating high technology based on imported and generated by themselves scientific knowledge, as well as the associated artifacts and services;
- societies depending on imported modern technology and the exploration of their natural resources;
- societies, importing equipment and depending on the exploration of natural resources (Rakitov, 2005).

Let us compare conceptual constructs such as post-industrial society, information society, and finally, knowledge society. Among the essential characteristics of the post-industrial society analysts point out movement from the era of machine industry to a society of intelligent technologies. Harvard sociologist Daniel Bell, representing the scientistic-technocratic approach of philosophy, in his work "The Coming of Post-Industrial Society: A Venture in Social Forecasting" (1975) calls the labor and capital as dominants underlying the development of industrial society, he also says that the contradiction between labor and capital is the dominant source of development in this society. As for technologies, they are instrumental methods of efficient action. There are symbols of technological revolutions. In the post-industrial context this symbol is the computer. In the interpretation of post-industrial society D. Bell is focused on the "axial principle" - a pivotal line, allows to interpret the social, economic, cultural and political contour of any

type of society. Axial principle can be a form of property - in this case we are talking about changing the form of ownership, the difference formations. If we turn to the potential of such axial principle as knowledge, the historical process will be presented by such stages as pre-industrial, industrial, post-industrial society. New social structure of post-industrial society, according to Daniel Bell, is associated with the ongoing revolution in the organization and processing of information and knowledge, where computer plays a central role: "Three aspects of the post-industrial society is especially important for understanding the telecommunication revolution:

1) the transition from an industrial to a service society;

2) crucial importance of codified theoretical knowledge to carry out technological innovation;

3) transformation of the new "intelligent technology" in a key tool for system analysis and decision-making" (Bell, 1973).

D. Bell sets arguments of the transition from the industrial to the service sector. In the United States (1970) 65% of the workforce was employed in the service sector, about 30% - in industry and construction and incomplete 5% - in agriculture. Daniel Bell calls as the axial principle of post-industrial society enormous social importance of theoretical knowledge and its new role as the guiding force of social change; Society has always developed on the basis of knowledge, but only in the second half of the twentieth century there was a merger of science and engineering, which resulted in the transformation of the essence of technology.

D. Bell announces inventions in the XIX century, the empirical process of trial and error (invention of the telephone by A.Bell, the development of the blast furnace process for the improvement of casting cannons by H. Bessemer, the invention of electric bulb and the phonograph by T. Edison); he writes about the specifics of modern advanced technology, which led to the modern engineering: "The essence of advanced technology - is in its organically close relationship with science; here the researcher is interested not so much in the final product of his work, but in the knowledge of the various properties of materials and the basic principles of their combinations and substitutions. As the outstanding metallurgist S. Smith, in our time "materials have been considered in the comparison, in terms of their properties needed for a particular application. Each new technological development - Radar, nuclear reactor, jet engine, computer, communication satellite - in its own way destroyed the old model, where each active material was tightly connected with each given type of product. So there was modern engineering" (Bell, 1973).

The essence of this change, both in technology and in science is related to the expansion of the "relations field" of theory and its sphere of application, so that systematic synergy in the discovery and development of new products and theories becomes possible. Science in its base – is a set of axioms that are topologically linked into a unified scheme. But a new theory changes the system of axioms and establishes new connections at the joints, which changes the topology. When the two sciences are combined into one, the new network becomes richer and clearer than the simple sum of the two parts. As modern science, and almost all other forms of human activity, is moving towards more and more specialization, in order to refine its concepts, the most important result of its relations with the technology becomes the integration of different areas or observations into a single theoretical system that has increasing productivity (Bell, 1973).

Daniel Bell calls the technology instrumental method of rational action, and names these new developments "intelligent technology": they allow putting algorithms and decision making rules into places of intuitive judgments. Algorithms are materialized in an automatic machine expressed in a computer program or set of instructions based on a statistical or mathematical formula, which is a way of formalizing the judgments and their standard applications. Intelligent technologies are the main instrument for the management of organizations and enterprises; they acquire in post-industrial society the same meaning as machine technologies in industrial societies. Knowledge is involved in practical processing of resources. Knowledge, but not labor acts as a source of value.

Economists attributed the production and exchange, using as variables "land, capital and labor", adding "business initiative" and "entrepreneurship", emphasizing the combination of capital and labor in the context of labor theory of value, but the role of knowledge or organizational innovation and their management, in fact, is ignored: "However, with the reduction of working time and with the decrease of the role of the production worker, it is clear that knowledge and ways of its practical application replace labor as a source of surplus value. In this sense, labor and

capital were the central variables in an industrial society so information and knowledge are crucial variables of post-industrial society" (Bell, 1973).

D. Bell, describing the United States as a country in which there was a three-stage transition from an agrarian society specifies the main economic activity of this society: the production and distribution of information. The information factor is the focus of post-industrial society. The analyst writes about the tectonic shift in the economy, when the production of goods is replaced by the production of services; knowledge thus gains the status of a driving force of innovation processes, the future is entirely predetermined by technologies as instrumental methods of rational action and determinants of the evolution of society. And since knowledge gains the status of the source of wealth and power intelligent technologies dominate in the management. Role of the "axial principle" of post-industrial society takes theoretical knowledge - a resource strategic level and an agent of changes in the society.

Telecommunications system in the post-industrial society is a powerful factor in the organization and processing of forming arrays of information and theoretical knowledge; gained its codified form theoretical knowledge is applied in technological innovations; intelligent technologies are turned into an important factor and system analysis tool, as well as an important factor in decision-making.

In the early years of the last decade of the twentieth century the discourse of research on the problems of social transformations and the role of knowledge in these transformations changed. Start of investigation has been given by such works as "The work of Nations" by R. Reich (1991), "The post-capitalist society" P. Drucker (1993), "Knowledge, labor, property" N. Stehr (1994). Analysts called the society that has emerged from the cradles of post-industrial and information societies, in many ways, - arose, in particular, options such as "post-oil society" (R. Barnett), "post-bourgeois society" (G. Lichtheim), "post-capitalist society" (R. Dahrendorf), "post-modern" (A. Etzioni), "post-civilizational" (K. Boulding), "post-historical" (R. Seidenberg), "post-economic" (G. Kahn), S. Alstrom called this society "post-protestant". These analysts have drawn attention to the wide range of different perspectives, which are based, in fact, on the transformation of formalized knowledge into intangible capital, which A. Gorz outlined in his article "L'immatériel: con naissance, valeur et capital".

The term "knowledge capitalism" (a phenomenon opposite to Industrial capitalism) is formed, as applied to the sphere of knowledge capitalism the costs on knowledge inputs are a source of income: "Knowledge capitalism should be understood as knowledge society, managed and organized on capitalist principles. In addition, cognitive capitalism should be understood as a kind of capitalism, in which knowledge is the main source of value, which implies its opposition to capitalism industry" (Polre, 2008). This thesis of B. Polre may be supplemented by the idea of A. Gorz, who predicted the role of the gravedigger of capitalism to knowledge: "As a result of its internal contradictions and inconsistencies, knowledge capitalism is extremely unstable, vulnerable, and fraught with cultural conflicts and social antagonism form of social organization. But it is precisely this instability gives an opportunity to develop in opposite directions. Knowledge capitalism - this is not capitalism, in crises, it is the crisis of capitalism itself, very much rocking the society" (Gorz, 2003).

The doctrine of knowledge society, that is formed today, does not have a single model of knowledge society yet, but the multiplicity of ideas about society of this type is reflected in the UNESCO report "Towards Knowledge Societies", - here, this multiplicity is reflected in such terms as "knowledge society", "worlds of knowledge". The comment of D.V. Efremenko about the specifics of the report is interesting. "It is obvious -says the author - that membership and tasks of the organization (UNESCO - An.K.) did not allow to specify in its official document a transition to a global knowledge society as probable and desirable prospects, in which cultural and ethnic identity remain, but will inevitably be in subordinated position relative to the universal scientific knowledge. Moreover, this situation is viewed in the report as highly undesirable. However, the argument that there is no single, originally given model of the knowledge society, does not mean that far-reaching homogenization can't be the result of transformation in this direction. Conceptual harmony here is sacrificed to political correctness. The authors of the report deliberately "balance" scientific and technical knowledge and autochthonous or "indigenous" knowledge. Due to this there appear evidences for reasoning about the knowledge societies that partly negate the fundamental factor of the coming global transformation. Multiplicity of knowledge societies can mean one of two things: either scientific knowledge and information shade a continuum of cultural and linguistic diversity, or radical change occurs, and

cultural and linguistic differences cannot hide the fact that humanity finds a common destiny in the global knowledge society, no matter how this prospect may frighten many of its representatives," (Efremenko, 2010). The author notes that today humanity is witnessing an unprecedented breakthrough in technology. According to Castells (Castells, 1996), the specificity of this breakthrough – is a fundamental dehierarchization, individualization and convergence of ICT. D.Bell, revealing the nature of post-industrial society called knowledge and information as strategic resources of the society. He also noted that in a new role both knowledge and information are the turning points of history. This idea appeared in two aspects: first of all, the nature of science has changed; "universal knowledge" has turned into a productive force; besides, Daniel Bell suggested that, the second turning point is also significant - the "liberation of technology from its "imperative" character, almost complete transformation of it into a controllable tool. Modern technology offers a lot of alternative ways to achieve the unique and time various results, at the same the production of wealth incredibly increases. Such are the prospects; the only question is how to implement them" (Bell, 1973).

We noted above that in knowledge society the production of knowledge is converted into an independent sphere of social production, into the condition and reason of transformation processes that take place in the society. Symbiosis of science and its technological applications is reflected in such phenomena as "technoscience" that became a manifestation of the changed mechanism of the use of both scientific and technical knowledge. If we talk about functional reorganization of science at the turn of XX-XXI centuries, it is possible to claim that the main function of science of this period becomes a function of technology. Today - for example, the position of a number of researchers (B.G. Judin, B. Schäfer, B. Barnes, Zh.Ottua) - explanatory potential of science becomes secondary - the ability to change is primary. We would say a little differently: the technological function of science is now coming to the priority positions, existing in parallel with such function of science as an explanation. Technoscience also takes a hybrid form, showing a unity of scientific technology and technologized science - technoscience, in fact, forms the reality in question.

At the same time, as noted by B.G. Judin, the process of technological application of science is associated with a certain specificity, which is largely determined by the following factor: research – is knowledge of the natural world, but also the transformation of the world, the creation of an artificial world, research – is "... the prototype of technological method not only of development, but even the vision of the world" (Judin, 2010).

B.G.Judin introduced the term to indicate the connection between science and technology that acquires a radically different form today. This term is "reversing". In relation "produced knowledge - practical application of this knowledge" a new block is included. According to B.G. Judin, (Judin, 2010), in the process of creating and improving the technology "integrates" the activity itself, technologies are created when they are ordered, and these technologies are with a predetermined list of characteristics. The process of consumption of knowledge in the knowledge society creates a certain contour of the structure of knowledge, which will be materialized into new technologies. Science has shown this property for the first time in the inventions of Justus von Liebig (the invention of artificial fertilizers and methods of conservation of animal protein), - these inventions by the opinion of P. Drucker are the beginning of the industrial revolution.

Today, many authors write about new versions of technological applications of science as a process that results in a "technoscience". About a fundamentally new role of science as a factor that affects all areas of the life-world of people write B.G. Judin and V.A. Lectorsky. Lektorsky notes a very important circumstance connected with the fact that today the new information technologies, as well as the technology converts BNIC (bio-, nano-, information and cognitive) form a new world of life and question traditional values. This world was variable in different cultural contexts, but certain invariants were preserved. Today, in the context of the new role of science and technology, these invariants, according to V.A. Lectorsky, are "hacked" (Lectorsky, 2010). The process by which a society based on knowledge, strives to exceed the natural constraints (this applies to the human psyche, his physicality), will inevitably face the challenge to a man. One of these challenges – is the position of "transhumanism" and "immortalism" (by referring to the potential of different kinds of technologies the idea of immortality can be implemented). "If you put the question of the meaning of human life not as a person but as a human - writes Lektorsky - transhumanists see it in creating the conditions to replace a person to "posthuman" ... This, of course, is a challenge to the philosophy ... Interference in complex genetic and neural structures of the human is extremely dangerous ... Instead of more

physically and mentally healthy beings we can produce a monster. But even if we can understand all the genetic and neural structures and accurately predict the effects of influence on them ... there is no assurance that this "Superman" will not completely destroy the culture with its ideas about human possibilities, about valid and invalid, the rights and responsibilities, all that makes us human ... posthuman society will be inhuman" (Lectorsky, 2010). The disappearance of death will destroy an idea about the meaning of life.

Let us make a remark that allows easy migration to the characterization of technoscience as scientific symbiosis of technology and technologized science. This remark concerns the nature of technology. Once in the "Ethics" Aristotle said, "To learn to do something, we should do it". Technologies appear theoretically. Theoretical idea how to do this – is only a starting point in the development of technology. Usually technology is developed for mass production of the product; therefore - as any inaccuracy causes multiple losses - all phases of technological processes are practiced. Technologies can be called unique and complex projects (such, for example, a programming technique: a single project is strictly hierarchical, divided into sub-projects) but that is because in such projects every step of technological action is practiced repeatedly as technology and so a complex project - a technology of techniques, metatechnology.

Among the widest range of philosophical problems, actively debated today in the philosophical literature of Russia and the West, there is the problem of risk. Discussed in the context of knowledge society issues, it turns to be rather specific in the context of sociology and the knowledge economy. Knowledge society itself is interpreted by many analysts as the present stage of information society. Such, for example, is a research position G. Bechmann (Bechmann , 2012): information society is interpreted and labeled as knowledge society in the case where the emphasis is on socially determined processes of reproduction and application, distribution of knowledge. Once, Ulrich Beck in his book "Risk Society" stated that he sees era paradox in the problem of risk. The same position earlier was taken by N. Luhmann. His systems theory has a certain paradigmatic last specifics. Its ideological platform is the general systems theory of Ludwig von Bertalanffy and synergy approach. These ideas N. Luhmann uses in the analysis of self-organizing social systems. N. Luhmann introduced and actively used the construct of self-observation: a necessary condition for the existence of the system serves the ability of self-observation, self-identification, possible through the separation of the system from the environment. By N.Lumann this is "observer of the second order". The system itself, self-determining the attitude to itself, separating it from the attitude to the world, practicing internal links and elements (through the process of selection), acquires the property of self-reference. Through the processes of differentiation, selection hierarchy of subsystems is formed in the system, complexity is reproduced. N.Lumann used the term to refer to the process of system self-organization, self-reproduction - this is the term "avtopoiesis". Introducing the concept of "self-observation", Luhmann thus defends the thesis about the necessary condition for the existence of the system; this condition, necessary and sufficient, is the ability of a system to self-observation and self-identity.

Entry of modern society to the stage of knowledge society brings new forms of scientific knowledge production, organizational forms of science are also transformed – there appear project studies analyzing (this is the position G. Bechmann, B. Gorohova, N. Stehr) the project design of science. The authors call the project design of science reflexive and problem (but not subject) oriented, correlated with public expectations. Range of emerging technologies today involves a number of hazards and risks, and it requires long-term planning and is associated with the transformation of science into policy-making actor; social evaluation of scientific and technological development is formed as a form (instrument) of political consultation (Bechmann et al., 2009; Gorokhov, 2012).

However, this may be a situation in which the social evaluation of science, engineering and technology competes with the sphere politics in the strategic decision-making.

Today, the need to change the organizational forms of science, as well as giving the status of the Institute for Political Counseling involved with the political institutions in the development of strategic decisions is caused by the transition from purely academic science to social "built-in" science, socially integrated. It is noted in the concept of post-nonclassical science; for example, V.S. Stepin writes about the expanding the scope of reflection on the activity that takes place within the post-nonclassical type of scientific rationality. Here the spectrum of non-scientific values and goals, peculiarity of activity means, the structure of values and goals are taken into account (Stepin, 2012).

Although precise and the most effective forecast is difficult to make, there are examples of the formation of institutions of social evaluation of scientific and technical projects in the world; in particular, one of them is given in the monograph of G. Bechmann. G. Bechmann himself, talking about science as a platform of political counseling and the political, social and economic decision-making, writes that only in this case, science is able to activate the social spheres which it supplies with explanations and models for reality structuring and alternative solutions, and only in this case, the innovation policy will become the basis for the scientific, technical and socio-economic policy. G. Bechmann proposed procedure of humanitarian expertise of technical projects: it is a system analysis and prediction of objects, such as energetic and social technology assessment and evaluation of the impact on the environment.

In the project concerning energy policy, attention is drawn to two points:

- thesis about the growing concern of the risk potential that is associated with the use of nuclear energy as a Nuclear energy is often connected with emergency conditions, the problem of nuclear waste disposal; there is the problem of sabotage;
- the thesis of a growing concern with the changing climate.

Experts proposed the concept of intermediate and final disposal of radioactive wastes, formulated the idea underlying the forward-looking energy policy, proposed the concept of environmentally and socially acceptable restructuring in the coal-mining regions and the use of gas as a transitional energy source; experts offered the option of energy efficiency and renewable energies: only taking into account the expertise of humanitarian projects strategic government decisions are developed. Policy counseling as a result of ongoing humanitarian expertise of projects takes such forms as hearings, personal commissions, expert councils. The overall target of humanitarian expertise is formulated with a focus on such blocks as early detection / prevention, systematic analysis of consequences, participation in decision-making, a focus on decision-making, transparency.

In the literature, however, there is a point of view of the authors who are careful in defining the scope of expertise. D.V. Efremenko interprets knowledge society as a society that has the potential of internal destabilization. The scale of production of new knowledge is enormous, but the political demand for expert knowledge is reduced. “Initially, - writes D.V. Efremenko - a knowledge society implies a situation where there is a rapid increase in the social and political role of scientific expertise” (Efremenko, 2010). However, when considering the contrast “knowledge-risk” it becomes clear that new social role of scientific expertise may be disputed. Identity and evaluation of risks performed by the scientific community of course become very important political tools. The scientific community identifies risks and inform about these risks those who are directly affected by the problem; as a result, a new interest group that can bring political pressure is organized. In conditions of uncertainty social role of scientific expertise - is, in fact, the effect when scientific observations and analysis impact on the processes occurring in the system, since they have become one of the types of activity of the system under study.

Science, on the one hand, promotes the adoption of rational socially significant decisions; on the other hand, with its help, we can realize that expert knowledge is limited because of its uncertainty.

Experts are trying to reduce the impact of uncertainty by modeling, the use of different methods of risk assessment and analysis, hypothetical constructions. However, conflicts between experts are quite often. This leads to a reduction in the authority of science and the devaluation of expert knowledge. Scientific analysis – is a way to deny any evidence-based political decisions. Thus, knowledge society is internally unstable.

4. Conclusion

The article gives reasons that the theories of post-industrial society and knowledge society – are close theories, they are based on the idea that society transformation projects of the second half of XX - beginning of XXI century are caused by the new role of information and knowledge, the prevalence communication technologies, knowledge and information in the society. And since the process of production of scientific knowledge and its further objectification in technology is turned into a dominant social problem, the priority development of the society becomes science. The development process “of the relation” of science and scope of its application is noted, by referring to the phenomenon of technoscience the process for systematic synergy in innovations of new products and

theories is disclosed; technologies are interpreted as an instrumental method of rational action. The phenomenon of technoscience is understood with the position of the changed mechanism of using scientific and technical knowledge, from the perspective of functional reorganization of science, where the main function of science - along with an explanatory function - becomes a function of technology. Technoscience forms the reality under study; technoscience form – is the form of a hybrid ("scientific technology" – "technologized science").

Knowledge society is presented as an evolving in the range of hazards and risks. Science in such society is turned into a policy-making actor. In order to implement the most effective forecast it is suggested to make a humanitarian expertise of technical projects. Expert knowledge is rather limited and uncertain, and it is possible to reduce this uncertainty only through the development of assessment methods and risk analysis - methods to identify and evaluate risks.

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