

Factors of emerging socio-cultural risks in the era of digitization and economization

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Abstract - The article deals with the causes and the factors of emerging socio-cultural risks at the post-industrial stage of the developing society. On the basis of the modern research studies in the fields of sociology, social philosophy and economics the author focuses on two key characteristics of the post-industrial society, i.e. digitization and economization. Within the study, it is suggested and reasoned to use principles and postulates of complexity theory as a methodological base and also to define an important trait of socio-cultural risks as uncertainty, which is the attribute of both digitization and economization, and complexity theory.

Keywords - risk, socio-cultural risk, digitization, economization, complexity theory, uncertainty.

I. INTRODUCTION

The term 'risk' logically describes the categorical human and social way of life implying the complexity and categoricalness of constant problems, such as heightening tensions in the activity of social, economic, cultural and political complex systems; increasing possibility of improper development; and emerging discrepancy associated with this development. This is the fact that actualizes the tasks of risk analysis connected, first of all, with human social life because this sphere is constitutive for a modern person. Examining the risks of social sphere is spread over the whole range of the typical risks as economic and cultural ones, and also over their synthesis, i.e. socio-cultural, socio-economical, socio-political risks and the others. The present study is paid attention to socio-cultural risks. The task to examine the risks is not restricted by their identification but gets to the level of estimating, controlling, risk managing and, as a consequence, searching for mechanisms of neutralizing and overcoming crisis situations produced by them.

II. MATERIALS AND METHODS (MODEL)

The analysis of the socio-cultural risks basing on complexity theory can be compared with the study of a multi-agent system. Originally, some agents are considered as a 'black box' of a complicated system in which the rules to regulate their individual behavior are known. The rules to be kept to by the agents can be simple, according to the complex. They may be determined or probabilistic. It is obvious that the agents are independent, goal-oriented or value-based, to some extent, when affected by external actions of other agents. But an agent has no mentality or any 'psychic' quality; so the agents can be demonstrated in the form of a

system. The agents can be not only corrective actions but the procedures of initial analysis and the risks themselves. The agents interact with a small number of other agents that comprise their local area. Nevertheless, the prolonged local actions have global circumstances complexly affected to the whole system. By definition, these global circumstances are not possible on the level of an agent in view of emergentism; they cannot emerge from the local rules (or qualities) which determine the agents' behaviour. This fact becomes clear within the following observations. Firstly, the target-oriented agents are independent and for this reason they often come into the conflict: an action leading directly to the target A may prevent from achieving the target B [9]. The local actions can spread, step by step, their impact on more distant agents, and thus outspreading on the whole system of management of socio-cultural risks formed by the agents and their interrelations. In general, these actions will have different effects in diverse parts of the system in various periods. Suppose that this system has an inner nonlinear character. It means the fact that the cause and consequence of risk emerging are not proportional. On the one side, a little chance of risk emerging can be enhanced by the global effect of positive feedback or by an 'autocatalyst'. This sensitive dependence on the initial conditions, that is often called 'the butterfly effect', is one of the characteristics of the determined chaos, i.e. the unpredictable outcomes are produced by the local determined processes. On the other side, the feedback may be negative, and the high chance of risk emerging will be suppressed, and then it can lead to the stabilizing the system state; in other words, the minimizing or removing the risk or its consequences will happen [9]. Based on the represented above the study (or analysis) of socio-cultural risks can be called as the self-organizing system with four possible positive outcomes:

1) a new risk emerging happens without external participation of a subject (in ideal conditions), but is regulated by means of the external or internal factors (or agents) under the action of an external or internal one (or ones), respectively;

2) a new risk emerging happens without external participation of a subject (in ideal conditions), but is regulated by a subject under the influence of an external or internal factor;

3) a new risk emerging happens under the influence of an external subject participating, but is regulated by a subject under the influence of external or internal factors;

4) a new risk emerging happens under the influence of an external subject participating and is regulated by it.

In the study of socio-cultural risks, the complexity and socio-cultural approach imply the following infinity or cyclic nature: a new technology → a new risk → a new tool to prevent the risk → a new risk → According to the complexity approach of V. Arshinov [10], the multi-level concept of crisis of V. Zherikhin and A. Rautin [11] and the 'formula' of risk managing the non-stable, destructive and organizational stages of risk emerging and managing can be determined. The non-stable stage is characterized by the increased sensitivity to the risk due to a new technology emerging and the attempts to apply it. To make a comparison with complexity theory we notice that this phenomenon is represented as a complexity characteristic [12]. On this stage the destruction is weakly marked, and it identifies the initial stage of risk emerging. This very fact is observed at the beginning of the destructive stage. The irreversible destruction occurs at the destructive stage when the probability of risk emerging acquires the global character and passes through the level of system stability, in words of complexity theory. Particularly, at the destructive stage the complexity quality emerges [12], and the process of transferring chaos into the order, i.e. the process of self-organization, begins. When forming a complexity quality finishes and self-organization begins to predominate over the destruction, the risk is characterized by the fast-moving variety of well-ordered changes. This stage is identified as dropping the risk under the influence of a new tool to prevent the risk. The minimization or removing the risk is characterized by the organizational stage. On this stage the all inner processes of the system suspend, then a new complexity quantity is fixed and a stable and qualitative new set of subsystems and elements of the system forms. In other words, the statement and applying of a new tool to prevent from the risk by the results of which the formation of the complexity quantity and a new risk occur and after that the non-stable stage of uncertainty arise again. Thus, the current process is cyclic with the emerging of new complexity quantities and risks.

III. RESULTS AND DISCUSSION

The positive dynamics of the spheres and the risk types characterize the task not only of risk managing as in the form of systemic approach (system-complexity). For this reason, the first place is taken by detecting the factors of the socio-cultural risk emerging and developing that enable not only to identify the actual and reasonable bases to actualize and implement the risk strategies in specific spheres of social activity, but to demonstrate the architectonics of risk-generating potential of the post-industrial society (cultural and social elements), in general. To solve this problem does not seem to be possible without updating the fundamental concepts of the functioning of the social system of post-industrial society. One of the key trends of its developing is the total digitization. Lately, a modern philosopher and programmer of Chinese origin, Yuk Hui, has presented the book 'On the Existence of Digital Objects' in which the author raises the actual and 'sharp' concerns of reality. What do we know about the real situation? Do we know what means the digital object and digital media? Do we have the skills to deal with these objects and to be oriented in this

sphere? If having known these new objects as handy ones we may understand to be required not uncensorious accepting of them or supercilious rejection but the care for them and existence with them? [1] The author tries himself to find out the answers. In Yuk Hui's view, "the digital objects are the new industrial objects comprising our life, and they are simply data identified in terms of 'objects', i.e. they compose some unity consisting of a great number of formal characteristics, for example, the profile of Facebook, the image of Instagram and etc. The digital media is the conditions in which these objects function and in which we live, but as compared to the 'natural habitat' of causality they can be materialized and estimated easily here. I consider that we live in an era when the nature concept is becoming problematic. I will claim that the term digitality demands to be focused on the data but not on the binarity or discreteness, and also that the progress of digital technologies is connected with advances in the data managing" [1]. This point of view appears to be interesting in the context of modern studies because it redirects the research and practical sphere to rethink the philosophic problematic of digital reality as actual 'Big Data', our sense-making interrelations with it in real time. And then this reality becomes processual, interactive, dynamic and emergent.

The next most important aspect of digitization of post-industrial society is the topological vector in the context of which there have emerged such terms (or research branches) as social topology and cultural topology. Culture as a complicated system of interrelating and embodied signs and meanings and as a symbolic field of public life possesses meaningful sovereignty apart from the human being. Social existence is not detached but continues its activity as a part of an emergent entity under the influence of the culture. One of the modern researchers and philosophers S. Azarenko in his study introduced and argued a new term 'topologem' implying the place or location where some different places generating an unrepeatable combination of 'places' of specific culture coexist movably and self-organising [2]. Such opinions are logically congruent with the methodology of complexity theory which is one of the leading branches of the study of the postnonclassical science. This fact confirms once more the interdisciplinary interrelations of the actual studies of science and philosophy.

Together with the digitization the post-industrial stage of a society developing is characterized by general 'economization' spreading not only on the social sphere but on the scientific field. Thus, the active dissemination of economical postulates and trends on noneconomic types of human and society activities results in the total transformation of a society identified by the high degree of uncertainty of both anthropologic and cultural and civilizational expectations. Such transformations are also observed in the present stage of development of postnonclassical science.

Taking into account the process of 'economization' of the post-industrial society it should not go unnoticed in the study of socio-cultural sphere of risk emerging that the field of economic activity of post-industrial society has enlarged broadly due to the necessity to study correlations of economic and noneconomic spheres of social activity and the characterization of their analogous and dissimilar evolution, potential socio-cultural and anthropologic outcomes are

increasing. According to this fact the meaningful value of anthropologic conception of social changes occurring under the influence of the ideology and practical results of 'economocentrism' that can be identified as "specific socio-cultural paradigm developed in the modern European period of social development and acquiring the dominant signification in the system of modern social relationships, and the scope and characters resulting from anthropogenic changes of cultural and civilization conditions of public life" [3].

The phenomenon of 'economocentrism' is determined in postnonclassical science as economism expansion (in a restricted way), in this respect this phenomenon has not been learnt to a full degree yet, if we can say more, it has been learnt very little and assimilated with modern philosophy. According to this fact 'economocentrism' is becoming more interesting not only with the scientific and philosophic point of view but with the position of society. Different attempts to prove and transpose theoretically 'economocentrism' into the interdisciplinary field of scientific and philosophic knowledge have given rise to a variety of disharmonizing sights and views about this unique phenomenon. Moreover, the insufficient and effective deflection of already existing techniques and methodologies of the study in terms of 'economocentrism' has determined the uncertainty which is one of the attributes of this phenomenon. This uncertainty is expressed in many ways; if thinking about the socio-cultural sphere, "the uncertainty of estimations of the present condition and future one of both European and Russian cultures makes the researchers study the nature of existing changes thoroughly" [4].

The uncertainty is one of the characteristics that unite several challenging branches of the study in the interdisciplinary approach. Thus, thinking about 'economocentrism' we emphasize that the uncertainty has the place in the noneconomic sphere of post-industrial society and is expressed in the correlation of increasing trends of the phenomenon's field of activity in the socio-cultural scope.

The unity in variety derives the uncertainty or the characteristic feature of postnonclassical philosophy which is examined in details in terms of the science of qualitative changes, i.e. synergetics and complexity theory [5]. One of the outstanding Russian philosophers V. Arshinov, placing greater focus on the 'uncertainty' of complexity theory, is focused on the 'semi-mathematical' equation with one unknown: "synergetics is X-science" [6]. The phenomenon of X-science involves in a specific range of X. On the one side, the range is open and incomplete, but on the other side, it is "indefinite in place of actual" [6]. However, V. Arshinov thinks about the great mission of synergetics, in terms of philosophy and postnonclassical science, which is forming the context of "interdisciplinary collaboration and dialog" [7]. In this regard, the discussions about existence and relations of philosophy and the science gain a new view: demarcation and detecting significance of philosophy and the science do not originally assimilate with synergetics since this process goes against the main idea and great mission of synergy. in the researcher's opinion, only compromise approach to such arguments and discussions can be useful to form so-called "metamodels of interdisciplinary communication" [8]. Corresponding derogation from the general theme of the study seems to be relevant because it

emphasizes the attribute of uncertainty as to the binding thread of the great number of studies of postnonclassical science and philosophy and also gives reasons for the relevance of complexity approach in the study of socio-cultural risks of post-industrial society.

The uncertainty is also an attribute of anthropogenic transformations of post-industrial society: mental, social and applied principles and practices of 'economocentrism' play the role of structural elements of the complicated system which determine a new human type – "homo economicus" [3]. In terms of complexity theory, a new human type is considered as the main actor of present and future changes. Not to mention the fact that the concept of "homo economicus" was examined and characterized by the researchers of different Philosophy and Economics scientific schools, the task to enlarge the problematic concerns of the study continues to be relevant and rational. For example, the concern of identification, expansion and estimation of socio-cultural risks arising under the influence of social initiatives of "homo economicus" is insufficiently unstudied. If compared the concepts of "homo economicus" and "economic man", we can come to the interesting conclusion. At present there has emerged some transformation of "economic man" from the personality's "envelope" into the personality type which is more and more common in the post-industrial society. This personality type in a greater or lesser degree is represented in different levels of social stratification and tends to the evolution taking place complementary to socio-economical and socio-cultural changes in the society.

IV. CONCLUSION

In spite of attribution of the uncertainty in 'economocentrism', the industrial and economic system as itself does not have such attribute. At this time, it is the uncertainty that expresses the epistemological status of the industrial and economic system exposing to the reflection the system of organized abstractions which separate the socio-humanitarian knowledge and its objects. Breaking this separation between the existing knowledge of 'economocentrism' and its industrial and economic basis is the complex modern task of philosophy and postnonclassical science, in general. The possible solution involves the engagement of heuristic principles of economic philosophy in the field of study to understand the phenomenon of 'economocentrism' in terms of the present level of knowledge about "the human's place in nature and nature's place in the human" [8]. Reactualization and applied realization of principles of economic philosophy will enable not only to find out the genesis and to estimate the development of economocentral society but to work out the strategies of management and prevention from arising socio-cultural risks typical for post-industrial society and also to generate the types of subjects having possibilities to solve these tasks. Paying attention to the other aspect of post-industrial society, that is digitization, we may think that the enlargement of field of digitization's influence and absorption is oriented into the quality improvement of the whole area of the individual's life and society because it is necessary to form the accurate possibility to increase significantly the scope of resources to be available to social processes because of which the quality of life should be increased multiply. However, this process is associated not

only with the emerging socio-cultural risks on completion of the process but with accompanying and difficult predicting the risks. This concern has faced the world scientific society very sharply because more and more states are involving in the process of digitization. The specialists consider the solution in the total transformation of all social (socio-cultural) processes; however, it should seem that the initial task comes to the simple concern, i.e. identification of risks. However, in practice this can be done with difficulties as far as the uncertainty is one of the most important or even key attributes of socio-cultural risks.

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