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***INNOVATIVE ENVIRONMENT AS AN OBJECT
OF SOCIOLOGICAL ANALYSIS****

SUMMARY. The scientific and practical necessity of working out a model of the innovative environment on a polyparadigm basis in the wake of system sociology in a combination with environmental and institutional approaches is proved.

KEY WORDS. The innovative environment, innovative activity, model of the innovative environment.

Research into innovations is considered to be a separate theoretical field in Russian sociology and is called the sociology of innovations. By the sociology of innovations we understand “a special sociological theory of the explanatory level, that studies innovation as a phenomenon of social life connected with material and spiritual human activity, in which people create cultural objects and work out and master new ways of production of different goods” [1]. Currently, a theory of innovations that are carried out at the organizational level is being closely studied. The subjects in the empirical research are types of innovations, innovative culture, technologies of innovation management, innovative climate, etc. Innovative trends in the development of organizations are estimated according to the provided amount, volume and types of innovations.

The theoretical basis of sociological research into innovative activity on higher levels is less developed, though the notion of the innovation system (national, regional or sectoral) has become a cornerstone of state innovation politics' development.

We think that the problem is that innovative development of a country or a region in practice is considered merely as a sum of the innovative results of all its organizations, and that the task of innovative development is understood just as a creation of conditions (first of all institutional and economical) for the innovative development of a sector, for every enterprise, firm and organization. At the same time, the innovative activity of a large social community is a comprehensive whole, the efficiency of which is defined not only by an innovative orientation of economical

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players but also by the quality of the interconnection of all its components, the degree of completeness of the environment where it is realized.

This issue is discussed by the Russian scientific community. Thus, I.G. Salimyanova in her doctoral dissertation in economics says: "In Russia there formally exist a lot of innovative system elements, but there is still no integrated organizational structure" [2]. V.E. Lepsky, doctor of psychology and the president of the Club of Innovative Development of the Institute of Philosophy of the Russian Academy of Sciences (IPhRAS) similarly describes the condition of the Russian innovative system. He says in his monograph "Reflexively Active Environments of Innovative Development": "At present there is no National Innovative System (NIS) in Russia. Moreover there is no positive tendency towards its formation. NIS exists only as a project that awaits to be realized. One of the reasons is that the sectorial approach prevails over the system approach and so, as a result, we have a number of elements instead of a system. The mechanisms of convergence of technologies, sectors, science and education are not used" [3].

The analysis of innovative discourse shows that theoretical approaches and meanings of notions applied in research have an economical character (see, for example, the papers of A.P. Bunich, S.V. Valdaitsev, A.E. Varshavsky, A.L. Gaponenko, S.Y. Glazyev, V.V. Ivanter, V.L. Inozemtsev, G.B. Kleiner, G.A. Krayukhin, R.A. Fakhutdinov, V.V. Yanovsky and others). The idea of the innovative development of Russia is very limited and fragmentary and reduces this complex process to the development of the economic sphere at the expense of technical innovations. For example, if we take the list of the aspects of modernisation in the report prepared for the meeting of the State Council of the Russian Federation, we can observe that social and administrative factors are of less priority in comparison with economic and technological factors [4]. From the standpoint of methodological positions this is absolutely wrong. The problems of the realization of innovative programs and projects are closely connected with social factors.

It is worth mentioning that in economics, social factors (culture, law, etc.) that influence the economy are considered as one of its structural elements of a noneconomic nature. They are regarded as a source of human resources, which are necessary for a successful project, or as indicators of success. This approach is followed, for example, by Y.A. Korchagin. He includes a favourable environment of functioning of human capital in the structure of an innovative economy, as well as education, science, human capital, an innovative system and innovative industry [5].

The effectiveness of innovative activity is determined by the condition of other social institutions. One can but agree with the statement of V.E. Lepsky: "Nowadays the social and human component of scientific and technological development comes to the foreground. In the 21st century there is a great interdependence of science and the social environment, and because of this one cannot study any technology or scientific discovery in isolation from existing social processes" [3]. A.A. Davydov, Chief Scientific Officer of the Institute of Sociology of the Russian Academy of Sciences and Doctor of Philosophy, proved on the basis of statistical analysis of the value of indexes and sub-indexes of the innovative capacity of Russia, that there are direct and invert relations between them and other social factors [6]. The economists who study the approaches to the formation of an innovative economy name, as well as basic economic principles, characteristics and indicators,

a number of social ones: a high quality of human capital, a high index of economic freedom, a high and competitive quality of life, high levels of education and science, the substitution of natural and physical capital with human capital in national wealth [5].

However, a study of concepts in the terminology dictionary on innovation activity, hosted by the federal portal for research and innovation activity, leads us to the conclusion that innovation, understood in fact as a technological process, is considered by the authors as self-contained and isolated. All the variety and complexity of the social components of the innovative activity in this conception is represented just by the personnel with the necessary qualifications.

We think that some other concepts should be added to the conception of the innovative development of Russia. First of all, the concept “innovative environment” should be included in its social meaning. By “innovative environment”, we understand a self-developing system of variables interconnected by direct and invert relations and linear and nonlinear connections, the basic elements of which are social components and models of innovative environment. A theoretical basis for the solution of this problem already exists in the Russian science. But it still needs to attract new sociological approaches to the interpretation of the concept and the modeling of the innovative environment.

The most important factor of success on the selected innovative path of development of a country is the ability and willingness of all components of the national innovative system to create innovations. We should apply a social and humanitarian approach to innovative issues that will enable us to take into account and use social conditions for the development of components of innovations, and synergetic interaction for consolidation and trust between the government, business and society in innovative development.

In modern Russian economic and sociological research, a variety of terms is used in the study of the factors of innovation development and the conditions in which innovations are implemented. They include innovative capacity, the institutional environment of innovative development, innovative environment, the internal and external innovative environment, etc.

As the analysis of publications shows, innovative capacity has an accepted definition, which is the basis of the conception of the innovative development of Russia. By innovative capacity we understand a set of resources of various kinds, which includes physical, financial, intellectual, scientific, technical and other resources that are necessary for innovative activity, and also institutional conditions such as law regulations (from the municipal to the federal level) of a financial and social character [7].

In many studies there is no clearly defined construct “the institutional environment of innovative development”, which includes a particular set of institutions, which, according to the author’s opinion, has an impact on innovative activity [8].

The innovative environment can also be defined as “a social space organized in a certain way, which provides innovative development for the benefit of society and the individual” [9] or “a certain social, economic, organizational, legal and political environment, that can either help or be an obstacle in the development of innovative activity” [10]. It can be divided into “external innovative environment” and “internal

innovative environment". "External innovative environment" is "far (macro-) and near (microenvironment) surroundings constituting the external environment of any member of the innovation process, providing either indirect (macro-) or direct (microenvironment) impact on the conditions of the innovative environment and its result". "Internal innovative environment" is "the in-house relationships and bonds formed by the state of the elements of the system of a company, that affect its innovative activity" [11].

There is a fuller definition of the innovative environment in the paper of Finnish economists Saarinen and Rilla "Innovation environment today and tomorrow". According to the authors' opinion, the innovative environment consists of structures, actors, reciprocalities and a legally created operating environment. In addition to these, other key elements include an innovation culture, processes that inspire individuals and organizations to create new, global information channels, as well as shared innovation knowledge and interpretative frames of reference. The innovation environment comprehends institutions which, together and individually, contribute to the development and dissemination of new information and new technologies, and which comprise a structural and legal framework on which the government bases policies promoting innovation [12].

The statements of M. Kastels are very important to understand the model of the innovative environment: technological innovation is not isolated. The peculiarities of systems of technological innovation is that they interact and depend on an environment where there is an exchange of ideas, problems and solutions. Innovation reflects: a state of knowledge, a specific institutional and industrial environment, the presence of sufficient qualifications to describe the technological problem and solve it; an economic mentality to make profitable use, the network of producers and users that can cumulatively share experience, learning through use and creation. According to Kastels, at the root of an innovative environment there is a social organization that shares the work culture and instrumental goals aimed at generating new knowledge, new processes and new products. It has an ability to generate synergy [13].

Understanding the model of the innovative environment is connected with the analysis of innovative activity and is realized on a polyparadigmatic basis in the wake of systematic sociology, the aims of which are "identification of the principles, laws, and the regularity of the structure and dynamics of social phenomena, processes and systems for the management of social systems" [14] in combination with environmental and institutional approaches. A systematic approach to the study of innovative activity presupposes consideration of components heterogeneous in their institutional affiliation like the complex of innovative activity, as well as the identification of the channels, borders and mechanisms of their mutual influence. Innovative activity as a type of joint, collective activity is a differentiated integrity that has a poly-subject character, which makes the specific factors of the integrity of the innovative activity as a process. Such factors are the properties of the subjects, the quality and strength of links between them. The subject of innovative activity is the organizations from different fields of the social division of labor, which are social systems formed by their individuals. For each individual subject, other subjects with specific interests and qualities that are modified as a result of their interaction in the process of joint activities create an environment of its activity to work together with other components. By the innovative environment we understand

the self-developing system, which is a collection of different types of subjects of innovative activity, including the subjects of infrastructure and institutions, to the extent to which these institutions and their interaction influence integrated innovative activity (see Fig. 1).

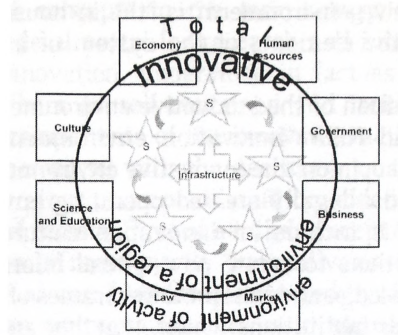


Fig. 1. The model of the innovative environment

The peculiarity of the environmental approach excludes the possibility of a pre-defined hierarchy of factors of formation of an environment in the process of project work, and suggests the relative equality of “random” conditions and circumstances, and also of “objective” preconditions such as goals, objectives, opportunities and other constraints [3; 137]. This allows to overcome the limitations of the systematic approach. In the environmental approach the aim of the management of the innovative environment is to achieve functional unity among all its member objects and systems.

Institutional analysis of the innovative environment focuses on established rules and regulations that regulate innovative activity at the scientific, legal, value and other justifications of innovative activity. The institutional approach should be supplemented with the social analysis of P. Bourdieu. While within the institutional approach, the subject is studied as an entity which realizes conscious purposeful activity according to certain rules, the social analysis is based on the concept of an agent whose activity is directed by habitus. Habitus is a system of dispositions, “mental or cognitive structures” through which people act in a social world: produce, perceive and evaluate practices. The study of the habitus of different social groups as dispositions in relation to changes in general and innovation in particular will reveal the factor that provides the practice of these groups, which form the innovative environment.

Understanding the model of the innovative environment also presupposes creation of a system of indicators of the condition of its components.

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