System Research as a Philosophical Analysis Object

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Abstract. The article reveals the features of the philosophical analysis of the system research methodology at three levels of the functioning of science: specific scientific, general scientific and philosophical. The main problems of the philosophical analysis of system research are highlighted, which are uniquely solved at each level - these are questions of the logic and methodology of system research, actually philosophical and historical. Logical and methodological problems of the system approach consist in the description, theoretical substantiation of system principles, research methods, in the analysis of the problems of systems thinking in the context of each level. Philosophical problems are presented as problems of the philosophical substantiation of systemic research, its analysis as a methodology of cognition through the prism of the main issue of philosophy. The historical problematics of the systems approach consists in analyzing the prerequisites for the emergence, formation and development of systemic ideas, principles, methods, the very methodology of the systems approach in general, and in determining the prospects for its development in the future.

Keywords: system, systems approach, systems thinking, philosophical analysis, methodology, science, science methodology.

Introduction

A wide arsenal of modern cognitive means, including the achievements of the new European classical methodology and innovative approaches of non-classical science, has a pronounced analytical nature and is not suitable for analyzing the integrity, hierarchy and organization inherent in objects representing systems. Currently, systemic studies of scientific and practical human activities are widespread. Having posed many significant problems, ranging from the development of special-scientific systemic methods (for example, scenario methodology [4] and the method of expert assessments [8]) to raising questions of a general world outlook [2; 9], they have long been the object of philosophical research. The object of philosophical analysis is the entire complex of systemic studies, including such issues as the development of philosophical problems of the systems approach [12], the formation of general worldview principles of system analysis [10]; building the logic and methodology of systems research; carrying out special scientific system developments [1; 7]; creation of a general theory of systems [11]. The range of issues analyzed in systemic studies is quite wide, especially if we consider that a complex network of specific problems corresponds to each sphere of human life. Bearing in mind the complexity of the problems of systems research, the variety of approaches to their implementation, on the one hand, and on the other, their important role and wide distribution from the sphere of private sciences to the field of ideology, worldview, it is advisable in the philosophical analysis of systems research to proceed from three levels of functioning scientific knowledge: specific scientific, general scientific and philosophical.

Purpose of the study – to substantiate the peculiarities of the implementation of systemic research at the specific scientific, general scientific and philosophical levels of scientific knowledge, to establish the methodological and ideological role of consistency as an interdisciplinary methodology.

Materials and methods

The methodological basis of the research is the phenomenological reduction, focused on the search for the specifics of the philosophical interpretation of the systematic approach, the identification of the specific features of the system at different levels. This methodological prerequisite is explained by the fact that, on the one hand, the systems approach is a general scientific methodology used in almost all branches of modern science as private scientific methods (for example, in technology, jurisprudence, pedagogy, management, etc. [3; 6]) and special system concepts [1; 7; 10], requiring their analysis both at the general scientific and at the particular scientific levels. On the other hand, the widespread use of the systemic approach in private sciences, its problems as a general scientific methodology, the spread of systemic research in the field of practical activity give rise to questions of a philosophical, ideological nature, which should all the more be investigated in philosophical works.

The study also implements an interdisciplinary approach based on the fact that the analysis of the problems of systems research should be, first of all, a philosophical analysis, and at the same time we are dealing with an object that belongs not so much to the field of philosophical reflection, but to the spheres of science and practice in the regulations of particular scientific and general scientific methodologies. Therefore, the philosophical study of such an object must certainly rely on these spheres, where the real, actual process of its functioning takes place. Considering the problems of systems research, proceeding from this specific process, which is the subject of analysis, first at the particular scientific, then at the general scientific levels, in the unity and difference of all levels, one can more or less reasonably carry out a philosophical analysis.

Results and discussion

The main problems of the philosophical analysis of systems research are, firstly, questions of the logic and methodology of systems research, secondly, the actual philosophical problems and, thirdly, historical ones.

Logical and methodological problems of the system approach are mainly problems that are solved in logical and methodological reflection, i.e. in works that contain, in a filmed form, the very specific process of carrying out a systemic research in any special scientific field [4; 5]. They generally consist in the description, theoretical substantiation of system principles, research methods, in the analysis of the problems of systems thinking. Already in such a general definition of the subject of these problems, one senses the ambiguity, the lack of concrete definiteness of their

purpose. Therefore, it is necessary to consider each issue in relation to the indicated levels, since they, the same logical and methodological problems, at different levels have a different status. This also applies to other highlighted problems.

We will now try to define them more specifically, at each level. At the private scientific level, the logical and methodological problems of systems research consist in the analysis of specific applied system methods, social and scientific system concepts in relation to a certain class of systems, i.e. it is an analysis of systems research in private sciences, the peculiarities of the application of the systems approach, associated with the specifics of the object of these sciences [3]. At the general scientific level, we are dealing with the analysis of logical and methodological problems in relation not to any particular science, but also to all where only a systematic approach is applied [2]. At the philosophical level, problems are considered that are relatively remote from the particular features of systemic studies in special sciences, based on their results or removing them. This is an assessment of the systemic approach as a methodology of cognition in terms of the philosophical theory of cognition and logic, its capabilities and boundaries, problems of the general methodology of systems research in general, general issues of systems thinking from the point of view of logic, changes caused in the cognitive process by the application of systemic principles of thinking, methodology knowledge, etc. All issues related to the analysis of the systems approach as a (general) methodology of cognition from the point of view of philosophy, dialectics as logic and methodology of cognition are considered here.

Philosophical issues are also dealt with at different levels in different ways. They are presented as problems of the philosophical substantiation of the systemic approach, its analysis as a methodology of cognition through the prism of the main issue of philosophy. At the particular scientific level, this general problem manifests itself as general worldview issues of systemic research in a particular science, issues of the systemic nature of an object, its study from the point of view of general philosophical problems of cognition, the philosophical and theoretical aspect of the problems of integrity, consistency, etc. Thus, through the problems of the systems approach of a certain branch of science, general philosophical issues of ontology, epistemology, and methodology are considered.

At the general scientific level, in connection with the relevant problems of systems research, one can consider, for example, such issues as the problem of integrity in modern science, theoretical aspects of general systems theory, theory of structures, the influence of system theory on the scientific picture of the world, etc. At the philosophical level, as it were, there is a crossing of two problems of a universal nature, in contrast to the previous levels, at which the universal (philosophical problems of the system approach) passed through a single and special (particular scientific and general scientific) consideration. It considers such problems as a systemic ontology or

a systemic picture of the world, consistency as a method or stage of cognition, their contribution to the development of the worldview, consistency and principles of development, the unity of the world, universal communication, a systematic analysis of the categories of philosophy, the place of the systemic approach in modern science, practice etc.

The historical problematics of the systems approach consists in analyzing the prerequisites for the emergence, formation and development of systemic ideas, principles, methods, the very methodology of the systems approach in general, and in determining the prospects for its development in the future. Thus, these issues are also refracted in accordance with the specifics of each level. At the private scientific level, she is interested in all of the above, only in historical terms in relation to individual industries. At the general scientific level, the author analyzes the emergence and development of systemic ideas in science, the formation of the system approach methodology as a direction of modern science in general, general systems theory in the general scientific aspect, in the aspect of structural and functional analysis, etc. From the point of view of the philosophical level, such issues are considered, for example, as the general philosophical prerequisites for the emergence of systemicity and systemic ideas, the influence of certain philosophical teachings on their development, the problem of consistency and the study of ontological, epistemological, logical and methodological problems in the history of philosophy, etc. This also includes studies devoted to the analysis of the systemic studies themselves, criticism of those other ideas in the past. This issue can also be viewed in a similar way. At the private scientific level, we are talking about criticism of incorrect interpretations of the application of the system approach and its results in certain sciences, their refutation and the identification of the actual state of affairs. On the general scientific basis, it is shown the inconsistency of speculations around the general scientific status of the system approach, the absolutization of the system approach or structuralism in modern science, etc. The philosophical level presupposes a struggle against the concepts of "systems philosophy", views like the recognition of the systems approach as "philosophy of modernity" or "modern science", against attempts to replace general scientific methodology with a systems approach, as well as against the dissolution of philosophy in systems theory.

Conclusion

Thus, passing each of these problems through these levels of consideration, it is possible to identify its specifics at each of these levels and create a holistic picture of its development in general (after consideration at all levels). By identifying the relationship between problems and different levels of their analysis, it is possible to create a concrete and holistic picture of both the methodology of the systems approach and its philosophical analysis. It is important that the problems are considered with a gradual increase in the level of research, and philosophical analysis

is more and more concretized, becomes a kind of integrity, and in the aggregate a system of philosophical analysis is formed. A specific analysis makes it possible to identify the specific scientific, general scientific and philosophical statuses of the systemic approach, more precisely, the systemic approach from the point of view of each of these levels. And then a holistic picture of the development of the systems approach is created, starting from particular scientific applications through acquiring the status of a general scientific methodology to penetrating into the space of philosophical problems proper, i.e. the ascent of philosophical knowledge of systemic research, a systemic approach from the singular through the particular to the universal.

The most essential and holistic knowledge that reflects the essence of an object can be obtained by properly examining its mature, developed state. At present, the methodology of the systemic approach as an object of philosophical analysis is not yet mature, it has become a subject, a certain holistic methodology of the general scientific status or at least an integral set of certain principles, methods, categories of systemic research on a single basis has not yet been built. As such, the systematic approach, one might say, is still in the making. And in the period of formation, deviations, inconsistencies, etc. are natural, since there is a development process that is complex and contradictory. Philosophical analysis is a reflection of this process of the formation of a systems approach as a whole. Thus, only by exploring the systemic approach as an emerging subject can one now carry out a more or less holistic analysis of it. The available works on the philosophical analysis of various problems of the systems approach show that their essence lies in the reflection of this process of formation. In theory, this means identifying and resolving the contradiction of becoming. From the point of view of the systems approach as a holistic subject, the available solutions are solutions to the problem for the current level of development of the systems approach, and not for its developed state. Based on the idea of the formation of a systematic approach as a whole and concretizing it on the basis of its analysis, it is necessary to derive a more or less integral, unified philosophical understanding of systemicity in science.

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