

RAS and Practice – Lessons of Interaction

Dear reader, the first issue of our updated journal will be published in February 2024, which is marked by a significant event – the 300th anniversary of the Russian Academy of Sciences. The jubilee date is not only and not so much an occasion to list past successes, but rather a reason to reflect on the experience gained and lessons learned from it.

The creation of the Academy of Sciences was a reflection of the most important fact that the development of our Fatherland is impossible without obtaining, accumulating and promoting knowledge (in its broadest sense). At the same time, the distinctive features of the Russian Academy throughout its history have always been, on the one hand, a close connection with practice, on the other hand, the systemic, interdisciplinary nature of research – not so much “on paper”, when drawing up plans and programs, as in the actual research process – from ideas to approaches to solving the most complex applied problems, and then the accumulation and transfer of acquired knowledge in the educational system. Many outstanding results, which were obtained within the walls and with the active participation of the RAS, owe their emergence to this very circumstance.

The process of formation, accumulation and multiplication of knowledge throughout the history of the Russian Academy of Sciences was closely connected with the solution of problems of socio-economic development of the country. First of all, with the development and, to put it in modern terms, with the “monetization” of its vast expanses. In the asset of the Academy’s glorious deeds are such landmark projects as the Northern Expedition (XVIII century), scientific “support” of the construction of the Great Siberian Way (Trans-Siberian Railway) (XIX century) and socialist industrialization (second quarter – middle of XX century), later – the creation of defense and aerospace industry, development of the basis of integrated development and use of mineral resources.

Many outstanding engineers and researchers (among them there were many members of the Academy) – E.E. Anert, D.I. Mendeleev, A.I. Voyeikov, A.A. Kaufman¹, D.A. Clements, V.L. Komarov, V.A. Obruchev² and

¹ Asian Russia. Volume three. Appendices. Publication of the Resettlement Department of the Main Directorate of Land Management and Agriculture. C. St. Petersburg, 1914. CLIII p.

² *Obruchev V.A. History of geological exploration of Siberia. Period four (1889–1917). M.-L.:* Publishing house of the Academy of Sciences. 1937. 573 p.

others – passed “Transsib school” in their time, Its most important result was the formation of approaches used later in the course of solving such large economic “problems” as the Angara-Yenisei and Ural-Kuznetsk ones. It was the importance of the system approach and the need to incorporate advanced knowledge into complex projects that gave rise to the idea of holding large-scale conferences with the active participation of the Academy – Irkutsk (1947, 1958), Kuzbass (1948), Novosibirsk (1980, 1985) (paper by E. Sh. Veselova).

The Academy’s active role in organizing and holding these conferences was due to the scale and complexity of the problems to be solved. Neither then, nor now any organization (institution, department) separately has a wide enough range of knowledge for this purpose, and the Academy of Sciences in this sense performs the role of an interdisciplinary integrator (not to be confused with a coordinator), which determines its place in the system of national institutions of Russia.

It is regrettable to note that the interdisciplinary approach successfully implemented within the Academy still does not work as we would like it to in economic practice, in solving socio-economic problems of the country and its regions (see the papers by A.V. Alekseev on the breakdown of the triad “output – capacity – investment”; by N.V. Pakhomova and A.V. Zaedinov on the limitations of the narrow energy approach in solving the problem of energy transition).

In the opinion of the author of these lines, the key to success here is to follow the principles of systematic, interdisciplinary approach at all stages of the life cycle of a “project” – from development (design) to implementation of a particular solution. Unfortunately, in the last 3–4 decades, all any significant projects of socio-economic development are based mainly on narrow sectoral (corporate) interests and proposals, which have to be built into the existing system of relations with the external environment – a path that is doomed to failure. Practice shows that it is impossible to agree and find a mutually acceptable solution to those issues that are initially developed at the level of individual industries, departments and corporations.

The genius of the creators of the interdisciplinary approach to solving the Angara-Yenisei and Ural-Kuznetsk “problems” – N.N. Baransky³ and N.N. Kolosovsky (leading specialists of the Council for the Study of Productive Forces, which was part of the orbit of the USSR Academy of Sciences) – was

³ *Baransky N.N.* Economic geography of the USSR. Review on the areas of the Gosplan / Textbook for universities and KomVUZs. M.-L.: State Publishing House, 1927. 334 p.

that they clearly saw the limitations and ineffectiveness of narrow sectoral proposals: “Theoretically, there is no doubt that for each specific case there is a maximum degree of concentration of combining enterprises, beyond which concentration becomes unprofitable. There comes a point when the combine begins to turn into an inconvenient cohabitation of enterprises, which loses both economic and technical sense. Finally, theoretically, the project may result in an ugly pile-up of enterprises, i.e. the project of a local combine may lead to self-denial of combining... In other words, every local combine we design should be checked for “flexibility”, “elasticity” of parts in case of possible expansion of production⁴”.

Overcoming the potential inertia and inflexibility in the development of “combines” (i.e. “production complexes”) was seen in the development of horizontal ties and interactions with enterprises at the regional level. It was assumed a priori that their creation would not only serve as a basis for the growth of modern industry and agriculture in a particular territory, but also give impetus to the processes of its evolutionary self-development in economic and scientific and technical directions.

Alas, in practice, approaches to solving the issues of economic organization of the country as a whole, and Siberia in particular, were gradually transformed from systemic and economically conditioned to command-administrative, accents in the management of projects for the development of productive forces were shifted to narrow sectoral ones, and the functions of territories were reduced to the role of a place of application of efforts of various departments. If there was any coordination of the interests of potential participants, it took place only at the initial stage of working out the key parameters of projects, while their further development was entirely determined by specialized priorities (it was first the prerogative of the People’s Commissars, then of sectoral ministries, and now of corporations).

Program documents, mainly based on departmental (including the Central Bank and specialized structures of state administration) and corporate procedures of development and approval, are characterized not only by their narrowly focused nature, but also by a certain inflexibility and insensitivity to inevitable changes.

From this point of view, the experience of the Academy of Sciences in the implementation of an interdisciplinary approach seems to be extremely

⁴ *Kolosovsky N.N.* The Future of the Ural-Kuznetsk Combine. M.-L.: State Socio-Economic Publishing House, 1932. 136 p. [P. 7].

relevant. Especially as an integrating institution in the process of organizing the adoption and implementation of “crucial” decisions. Unfortunately, for example, these issues were not reflected in an acceptable way at the conference in Kemerovo in November 2023 (paper by E. Sh. Veselova).

The Russian Academy of Sciences is a unique phenomenon in the life of our Fatherland. The knowledge accumulated by generations of researchers, creative spirit and close connection with the fate of the country have always been decisive factors in its development and will remain so for many years to come.

Editor-in-Chief of the journal,
academician of the RAS



V. A. Kryukov

