

Opinion Page. The Social Philosophy of Science: Its Russian Sources

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A Social Philosophy of Science. An Introduction (Monograph). Baden-Baden: NOMOS, 2023; *Interactive Zones: On the Prehistory of the Scientific Laboratory*, *Herald of the Russian Academy of Sciences*, 2014, v. 84, issue 6;
The Philosophy of Science: A Political Turn, *Herald of the Russian Academy of Sciences*. 2015. V. 85. No. 6;
Realism: A Challenge for Social Epistemologists. *Social Epistemology*, 2015, No. 1;
The Formation of Social Technologies: Stages and Examples. *Russian Studies in Philosophy*. 2017. T. 55. № 1;
Towards a Social Philosophy of Science: Russian Prospects, *Social Epistemology*, 2017, No. 1;
Gift versus Trade: On the Culture of Science Communication, *Philosophy of the Social Sciences*. Online first, 1 August 2019. <https://doi.org/10.1177/004839311986469>;
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His group's work at Lobachevsky State University is on-going. The first special issue of *Epistemology and Philosophy of Science* dedicated to the centenary of the Vienna Circle is expected to come out of print before April 1. A number of scholars from different countries are contributing.

The third special issue of the journal will come out before October 1. Its theme is "Science in a Free Society" being devoted to the centenary of Paul Feyerabend. The same topic has been chosen for the group's invited session at the World Philosophical Congress in Rome to be held in August with the participation of speakers from Russia, Germany, Norway and Croatia.

In September the IVth Congress of Russian Society for History and Philosophy of Science in Vologda (400km from Moscow to the north) will be held with invited plenary speakers from UK, Norway and Croatia, among others.

The group does its best to promote an international agenda in philosophy and STS and to support academic solidarity.

THE SOCIAL PHILOSOPHY OF SCIENCE IS distinctive in adopting a mediatory approach, which is situated at the point where epistemology meets the history of science, sociology, political and cultural studies. It aims at overcoming the inertia of narrow-mindedness inherent in any specialist and inspires active interaction with other disciplines. The social philosophy of science consciously and purposefully addresses the problem of how a philosopher, a humanitarian, or a social scientist in general can act as a mediator in communication with other scientists and with public agents. Science and society are pluralistic and interrelated entities, each existing and evolving in a peculiar manner.

The main idea of the social philosophy of science is to return all the richness of social, cultural, and intellectual life, in which science is de facto immersed. It is to revive all the excessive socio-cultural content from which modern science is trying to largely distract; to remind the public and scientists about means of understanding science at its true value as a global social and ideological problem, like a gift that no one is able to reject.

The current situation and how to transcend it

The philosophy of science as a scholarly discipline exists side by side with other disciplines today within an interdisciplinary framework of the history and philosophy of science or science and technology studies.

The rationale behind this “joint venture” is commonly seen in the division of labor. The history of science focuses on the rise and development of scientific theories in the past; the sociology of science deals with science as a social institution; the psychology of science investigates the mechanisms of creativity and one’s personal impact upon scientific discoveries; and finally, the philosophy of science is responsible for the logical and methodological analysis of the structure and growth of scientific knowledge, mostly within the context of justification.

This allegedly fruitful division of labor presumes the independent existence of social, personal, and cognitive domains, and the desired interdisciplinary communication between the correspondent disciplines aims to account for the complementary understanding of science. But in fact, no sufficient exchange of meanings takes place, for every discipline insists upon its independence and prior significance. Under these conditions, neither a consistent picture of science appears to be possible, nor might science policy be construed and justified based on this disintegrated conglomerate of knowledge.

A way out of the situation is as follows:

- a) to acknowledge the non-independent character of the philosophy of science;
- b) to learn more from social philosophy;

- c) to revisit the epistemological status of the natural sciences as the only cognitive ideal;
- d) to focus on the social and the human sciences in search of a new methodological experience;
- e) to cease considering concrete case studies as a new version of the “neutral language of observation”, which gives a “crucial justification” of a theory, and to view new philosophical interpretations as a necessary feature of any case study.

1. Figures and Insights

An update of the current agenda of epistemology and the philosophy of science is taking place nowadays; the Russian philosophical tradition is relevant to this development. In contemporary Russia, there are many research communities and schools in the field of epistemology and history and philosophy of science.

Some of them aspire to occupy an influential place in world thought, being either proponents or analysts or critics of the new trends like the Moscow Methodological Circle founded by Georgi Shchedrovitsky, the School of Dialogue by Vladimir Bibler, the School of cultural/historical epistemology by Gustav Shpet, Leo Vygotsky and Vladimir Zinchenko, and the School of Social Epistemology. While different authors undertake efforts to construct the history and conceptual foundations for a particular epistemological tradition, their approaches are closely related.

Their shared commitments include revisiting the Marxist tradition without either its total negation or acceptance; a non-mentalist understanding of knowledge; introducing the concepts of activity and communication into epistemology and the philosophy of science; taking seriously epistemological trends in Russian philosophy and humanities in the 19th and at the beginning of the 20th century; analyzing science in a social and cultural context; and looking for a dialectical combination of plurality and unity of knowledge.

As a matter of fact, there were Russian philosophers (Pamfil Jurkevitch, Vladimir Solovjev, Sergej Trubetskoj, Gustav Shpet, Paul Florensky) who introduced the basic philosophical concept of “integral knowledge” (“*zel’noe znanie*”) at the turn of the twentieth century. This concept linked together the value and the cognitive dimensions of the mind returning to the ancient ideal of the Wholeness of Goodness, Beauty and Episteme.

This concept was applied further in the formation of cultural/historical epistemology based on the ideas of Shpet, Leo Vygotsky, and Mikhail Bakhtin. Their approach provides effective means for revisiting the contemporary philosophy of science and its restructuring into an integral vision of science as a unity of knowledge, activity, and communication.

The social philosophy of science as a new trend close to STS is designed to investigate the multiple conditions of the circulation and growth of scientific knowledge. In particular, it tends to reinterpret the idea of the external determination of science, which was especially emphasized by [Boris Hessen](#) (1893–1936). Hessen was professionally trained as a physicist and was then elected to the Russian Academy of Sciences as a philosopher.

Hessen was the first to give a reconstruction of the social, economic, and technological roots of scientific knowledge using the case of Newton mechanics. He delivered his famous paper "*The Socio-Economic Roots of Newton's Principia*" at the Second International Congress of the History of Science in London (1931).

This work became foundational and paradigmatic in opening the prospects for the social history of scientific knowledge [Hessen, 1934]. The popular accusation of him as a vulgar Marxist economic determinist was the first critique of his social/epistemological approach to science. Under Stalin's regime, he was convicted of terrorism and executed (rehabilitated 1956). Thus, his program remained incomplete, misinterpreted, and nearly forgotten until the end of the 20th century, when it was tacitly identified with the relativist interpretation of science.

Actually, Hessen's program might be viewed as giving rise to the different trends in science studies: to vulgar economic determinism and to relativist and critical social epistemology. So, the gradual reinterpretation of Hessen's work went along with the understanding that the development of science satisfies not only technical, economic, and political needs. Here, the ideas of Shpet appeared to be highly topical.

[Gustav Shpet](#) (1879–1937) is usually regarded as a Husserl pupil and follower yet elaborated an original philosophical concept combining Husserl with von Humboldt, Hegel, Neo-Kantianism and the Russian metaphysical tradition. Shpet criticized psychologism for its inability to grasp consciousness (psyche) as a “living whole” and at the same time rejected Husserl's “the pure Ego”. Raising the question of the agent of consciousness, Shpet evidentially followed Hume in his criticism of the mental substance. Doing this, he proceeded from the pantheist–idealist vision of the mind, while gradually and tacitly approaching the idea of culture as a topic of intellectual activity:

Ultimately, it is as impossible to say *whose* consciousness as it is to say *whose* space, *whose* air, even though everybody is convinced that the air which he breathes is *his* air, and the space which he occupies is *his* space. [Shpet 1916, 205]

In his later works Shpet definitely emphasizes the necessity of the social/cultural stance in his reinterpretation of Husserl's phenomenology, appealing to language as the collectively shared “objectivization” of consciousness and cognition.

Shpet also deals with the philosophy and methodology of the humanities in his *Introduction to Ethnic Psychology* (*Vvedenie v etnicheskuyu psikhologiyu*, 1926). He discusses the subject and tasks of ethnic psychology in historical and philosophical contexts, analyzing in detail and thoroughly criticizing ideas of such representatives of the school as W. Wundt, M. Lazarus, and H. Steinthal.

Shpet's ideas were immediately picked up (though often without citations for Shpet belonged among politically suspect thinkers) by Roman Jakobson, [Mikhail Bakhtin](#), and Leo Vygotsky and strongly influenced the developments in Russian linguistics and literary criticism, psychology, and cultural studies. He was the first director of the Institute of Philosophy (which currently belongs to the Russian Academy of Sciences) but was convicted and killed under Stalin's regime.

Bakhtin (1895–1975) was a professional philologist (he dealt with Rabelais, Dostoyevsky etc.) but was widely recognized as a philosopher. He paid major attention to the concept of creative personality, to the understanding of knowledge and consciousness as a communicative text. According to Bakhtin, the concept of text obtains a universal character and expands itself into the concept of a cultural object as such. His original categories, some

of which are difficult to translate (the Alter, Non-alibi in Being, Dislocation, Dialogue, Polyphony) describe the lifeworld of man within the process of scientific and literary quests. He wrote:

Every human act is a potential text and can be conceived (as a human deed and not as a physical action) only in the dialogic context of the time (as a comment, as a meaningful position, as a system of motivations). [Bakhtin 1979]

[Leo Vygotsky](#) (1896–1934) is one of the father figures of Russian psychology presented knowledge and consciousness in the context of activity and communication. The following quotation from him shows a parallel with British contextualism (B. Malinowski, L. Wittgenstein):

A word takes in, absorbs from the entire context, with which it is interwoven, the intellectual and affective contents; it begins to mean more and less than its meaning contains when considered by itself and outside its context: more, because the range of its meanings expands, acquiring a large number of new spheres filled with new contents; less, because the abstract meaning of the word becomes limited and narrowed down by that which the word signifies exclusively in this context... the sense of a word is inexhaustible...

A word acquires its sense only in a sentence; the sentence itself acquires its sense only in the context of a paragraph; the paragraph, in the context of a book; and the book, in the context of the author's work in its entirety. [Vygotsky 1956, 370]

Vygotsky was a founder of the activity approach in psychology, while [Evald Iljenkov](#) (1924–1979) provided its transfer into philosophy. Iljenkov was known as a devoted defender of dialectical and historical materialism against naïve and metaphysical realism (“positivism”, as he called it). He is still influential within the activity approach in epistemology and the philosophy of mind.

His position could be dubbed today as “externalism” since he understood knowledge and consciousness as an objective ideal form existing outside the brain and presented in cultural artifacts and social relations. The orthodox Marxists treated him as a Hegelian objective idealist (immaterialist). Being strongly criticized and isolated, he fell into depression and committed suicide.

Iljenkov writes:

The problem of the ideal has always been an aspect of the problem of the objectivity of knowledge (“truth value”), which is relevant for those forms of knowledge that are determined and explicable not in terms of the whims of personal psychophysiology but rather due to something much more serious, something that is above an individual psyche and totally independent from it; the “ideal”, conceived as a universal form and law of existence and change of the multiple phenomena that are empirically and perceptually given to a human being is detected in its pure form and fixed only in the historical forms of spiritual culture, socially significant forms of its manifestation. [Iljenkov 1979, 130]

His position is still relevant for the promotion of Karl Popper's project of the “objective world” of knowledge and culture and for the critique of metaphysical realism, which is so

popular in contemporary analytical philosophy (Colin McGinn, Paul Boghossian, Lynn Baker etc.).

A synthesis of the activity approach with the social/cultural concept of the mind has been suggested by Mikhail Petrov (1923–1987), who proceeded from linguistics to philosophy and the sociology of science. The Marxists (Iljenkov among them) strongly criticized him for his philosophical deviations and his new philosophical language, which seemed to be close to the analytical philosophy of language of Wittgenstein and others.

Petrov's main argument maintains that knowledge and consciousness can be properly understood only as a part of historically defined "socio-codes", which does not coincide with any language structure. He describes various historical socio-codes (ancient, medieval, modern) in their peculiarity, paying attention to the corresponding text types within the context of activity and communication.

He wrote:

For the entire ...set of the array of knowledge and directly related institutions and mechanisms designed for various purposes, we ... shall use the term socio-code, having in mind the main cultural reality holding in integrity and discerning a fragmented array of knowledge, the world of activity dissected into single interiors, and the supplying institutes of communication. [Petrov 1991, 39].

The main works by Petrov were published posthumously; he had no academic career as he was a politically unreliable scholar.

And—last but not least—there is a great pleiad of philosophers, scientists, and writers of the late nineteenth and early twentieth centuries united under the common label of "[Russian cosmism](#)": Nikolaj Fedorov, Konstantin Tziolkowskij, Vladimir Vernadsky, and Alexander Tchizhevsky.

Highlights of the Russian Philosophy of Science

So, what is characteristic of the Russian philosophy of science? From its very beginning, it was inspired by the idea of the unity of the human mind. This holistic approach has deep historical roots in the pantheistic vision of the world and human beings. Today, there are many reasons to learn from this holism in order to find a way through various methodological and value controversies. Nearly every basic epistemological concept represents a controversy of this kind.

This is the case for example, with the concepts of rationality and truth, which balance between the technical, instrumental, formal approaches, on the one hand, and the abstract, fuzzy, metaphysical ones, on the other hand. Neither the former nor the latter go beyond the well-known classical philosophical trends, which hardly correspond to a variable, dynamic, contradictory picture of the different cognitive practices within the multiplicity of their cultural and social contexts. Although the history and sociology of science and culture gradually and tacitly approach this picture, they lack proper methodological tools.

The way to the theoretically rich and practically applicable image of knowledge might be provided by the following concepts: "activity", "communication", "context", "culture",

“discourse”, “dialogue”, and “author”. They had been profoundly elaborated in the Russian philosophical tradition and used already for incorporating knowledge and cognition into a broad scope of history and sociality much earlier than the post-positivist and the post-modernist thinkers began doing this.

The basic task of the Russian philosophy of science, having developed in opposition to orthodox Marxism, might be summarized as follows:

- (1) to dismiss the idea of knowledge as a mirror image of reality;
- (2) to strengthen the role of the creative cognitive agent; and
- (3) to overcome the “demarcationist” view of knowledge as identical with science;
- (4) to conceptualize creative cognition as a form of social constructivism.

Point (3) is often misunderstood. Rigid boundaries limiting the genially transdisciplinary scope of epistemological study has a number of negative consequences. There are: 1) the exaggerated separation of the philosophical disciplines from one another (epistemology, the philosophy of science vs social philosophy, ethics, anthropology, religious studies etc.); 2) the subsequent methodological weakness of non-epistemological studies; 3) the subsequent empirical emptiness and practical impotence of epistemology; 4) the idealized and perverted picture of the history of science; 5) the unbridgeable gap between “the cognitive” and “the social”.

All this in no way means that science is equivalent with non-science but rather requires a more realistic image of knowledge as a complex, self-developing, human-dimensional system that could be separated from the context only in abstraction. Accordingly, its analysis is impossible without a proper social ontology and an interdisciplinary interrelation between the social and the human sciences.

Point (4) places a special emphasis on the final significant element of this new vision: the paradoxical concepts of creativity, illusion, and utopia. A thorough historical analysis can demonstrate that every scientific discovery arises on the ‘shoulders of giants’ and therefore is nothing new in itself. Thomas Kuhn wrote about “Lavoisier’s revolution”, showing how it was evolutionally prepared and even determined by previous history of chemistry.

What kind of lesson should a scientist draw from this consideration? Study the history of his/her discipline and search for insights there? Yet this would disorient the research if it aims at discovering something really unexpected and new. The significance of intellectual history should not diminish the role of personal creativity, turn backward the vector of the individual interest and engagement of a devoted researcher even if creativity to some extent reveals its illusionary nature. Competence and scholarship cannot substitute for imagination and inspiration, an ability to improvise, to start from scratch.

Thus, the notion of creativity appears to be a regulative idea in line with Immanuel Kant. In this context, we can recall Kant’s idea of the regulative function of pure reason. He wrote:

The hypothetical exercise of reason by the aid of ideas employed as problematical conceptions is properly not constitutive. That is to say, if we consider the subject strictly, the truth of the rule, which has been employed as an hypothesis, does not follow from the use that is made of it by reason. For how can we know all the possible cases that may arise? Some of which may, however, prove exceptions to the universality of the rule.

This employment of reason is merely regulative, and its sole aim is the introduction of unity into the aggregate of our particular cognitions, and thereby the approximating of the rule to universality. [Kant 2011, 440–441]

So, the sources of human insights remain mostly unclear, but the same is true of the natural and social consequences of one's creative research work. The results achieved never completely coincide with the proposed purposes. Temporal uncertainty and the risk of fallacy accompany any research which aims at something new. In this sense, every scientific enterprise essentially includes a utopian attitude, a super-goal, a regulative ideal of the labor of love.

This exaltation of reason, its freedom in the face of multiple limitations should be strongly supported by the power circles if they wish any positive movement. "An independence of thought from the state is a question of public significance," Sergej Averintzev once wrote. Only then will a scientific quest expand into a global project, which holistically transforms nature, society, and the very knowing agent.

What is the disciplinary status of the social philosophy of science? For a long time, at least since the time of William Whewell, the philosophy of science as a whole has been a discipline, and I hope that this will continue to be the case. And the social philosophy of science is one of the approaches, which shares the imperative of scientific and interdisciplinary communication; this is the general perspective of development, which today is called the strategy of "trading zones" [Galison 1999] or "interactional expertise" [Collins, Evans 2002].

Let us turn to a simple analogy since it promises to be heuristic. There's a man walking down the street. First of all, he is interested in covering the distance from A to B, while not falling, not getting dirty, and not hurting passers-by. He is narrowly focused. His gaze is fixed on his goal and, by and large, he does not notice what is being done around him, although there is a lot going on. In addition to those people who have a chance to directly encounter him, there are other people walking, there are even very interesting ones, but he does not notice them; birds fly, cars drive, some of them, for example, are museum exhibits worth a million dollars, but the man does not pay attention to them. There are animals in the parks, some squirrels. He doesn't notice. He is striving for a goal. He has a focused consciousness. He is like a researcher, looking for the truth, and he does not recognize the context of his activities and communication. This context is left behind. Peripheral consciousness doesn't bother him.

So, the social philosophy of science is a project that returns to the individual moving towards his goal, but attentive to all the wealth of his environment. At least, it strives to do this, realizing the fact that this is a rather burdensome attitude—not only to focus his consciousness on immediate tasks, but also to grasp the surrounding reality at least out of the corner of his eye. It is important not to lose sight of how the world is diverse and beautiful, that this person himself is still alive, that he already has a lot more interesting things behind and ahead of him, although now he is just going to the store for bread.

This is the main idea and the project underlying the social philosophy of science—to return all the richness of social and cultural life to science, in which it is de facto immersed. It is to revive all the excessive socio-cultural content from which modern science is trying to largely distract; to remind the public and scientists about means of understanding science at its true value as a global social and world-view problem.

An essential part of the social philosophy of science is that it recognises and copes with the reality of the uneven, contradictory, and value-laden unity of science within society. The programme is elaborated and defended in my book *A Social Philosophy of Science. An Introduction*, Baden-Baden: NOMOS, 2023.

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For elaboration of these matters see the book at the NOMOS website: [HERE](#)