Summary

The social philosophy of science adopts 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. Understanding and coping with the *uneven, contradictory and value-laden unity of science in/with society* is originally part of the design of the social philosophy of science. 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.

Contents

Preliminary Considerations

"Social philosophy of science" is a term that I proposed eight years ago within a number of research projects. Now I shall list and briefly comment on the main problems that it aims to cover, as well as the directions of further research. The first problem is whether the new concept of the "social philosophy of science" is sufficiently justified while there are other similar concepts: "social epistemology", "historical epistemology", "sociology of knowledge", "STS", and so on. What particular question does this term answer? In my opinion, this is the answer to the question of what is the proportion of philosophy in the philosophy of science. There are still discussions on this topic. Many researchers believe that the philosophy of science is a special, non-philosophical discipline. A number of my colleagues and I hold another view. In my opinion, in raising the question of the social philosophy of science, we tend to clarify how society can benefit from the philosophical study of science.

Another problem is what philosophy presents in this regard and how the philosophical and interdisciplinary contents of the social philosophy of science correlate to each other. There are philosophical ways of understanding science, there are natural science's self-consciousness, and sociohumanitarian approaches on science. I believe that one hardly needs a demarcation line between these attitudes to science. Rather, philosophy problematizes disciplinary and interdisciplinary interactions, poses certain questions to them, and interdisciplinary research provides a source for updating philosophical research in a related field. For philosophers, interdisciplinarity represents a genuine internal communicative set, which deserves intensification and inspiration. Creativity is deeply rooted in interaction, and philosophy engages in promoting and critically commenting on it using the whole cultural, historical, and political context.

The third problem: philosophy is a type of basic research; can we talk about the applied value of the social philosophy of science? The first finding here is that this problem is being raised altogether. In fact, science exists, on the one hand, as a cultural value, and this tradition goes back to ancient times. On the other hand, science is the subject of social management, certain policies and itself acts as an intellectual resource for social technologies. How does all that relate to each other? This general problem

includes philosophy and is formulated as the possibility and necessity of the applied use of the social philosophy of science.

The social ontology of science is the fourth problem worth discussing. What's the point? Science, both as a social institution and as a system of knowledge, does not exist as an idea in a vacuum, but is rooted in a somewhat understood reality. What is the angle of this understanding, the angle that is significant for science, technology, and intellectual activity in general? In other words, how does science relate to society? What does it mean "to serve social needs"? Is it a blind or critical service? Here we logically move on to the fifth question about the role of the concept of "context" in the social philosophy of science. And here we also ask about the difference between the concept of "social philosophy of science" and "sociology and history of science", which uses this concept as well. Does context basically limit the understanding of science or enrich it? Does context belong to "the given" or to construed artifacts?

The sixth problem concerns the relationship between the concepts of sociality in/of science and scientific communication with all their similarities and differences. My solution, formulated in the correspondent chapters, suggests distinguishing between three types of sociality of knowledge, some of which coincide with the concept of communication in science. The relationship between utopia and politics in the structure of the social philosophy of science, their cognitive relevance and irreducibility is the seventh problem. In part, it coincides with the question of the social ontology of science, but here we emphasize the difference between ideological and managerial components of this ontology. It is also the question of social and humanitarian technologies as a subject of research and design. It is evidentially related to the question of the applied value of the social philosophy of science.

And last but not least, in this book, I do not intend to single out the problems of the Russian philosophy of science as a special intellectual tradition, although many Russian philosophers are the giants on whose shoulders I stand. It is more correct to consider all these problems from the point of entwining rather than distancing or confronting the Russian and West European intellectual traditions from or with each other. Russian philosophy has always been part of the vast diversity that is called European philosophy.

Elucidating the problems posed, it makes sense to return to the term and concept of the social philosophy of science, to the ratio of it in the classics and the present. The classical philosophy of science went through several stages of development, and within the framework of the latter, the

seeds of new approaches were sown. So, as early as in the 1930s, if we take the works of Ludwick Fleck [Fleck 1935/1979], and of course, since 1962, when the famous book by Thomas Kuhn was published, we can talk about gradual turning to the social philosophy of science, although Kuhn himself hardly guessed it.

Moreover, the classical philosophy of science was never a single paradigm, which was then replaced by another. With phase shifts, various currents in the philosophy of science constantly arose, existing simultaneously, sometimes intersecting, sometimes contradicting each other, or practically disregarding each other completely. In the end, as we are witnessing today, all this gave rise to a variety of areas in the philosophy of science, including divergent and orthogonal ones. It would be wrong to say that today there is no longer a classical philosophy of science. In fact, it continues to exist in some variants coming from Jürgen Mittelstraß, for example, who follows the tradition of logicism in the philosophy of science in line with the Vienna Circle's school of thought. The tradition of scientific realism, which is especially popular today in the United States, also needs to be mentioned.

At the same time, alternative options are being developed and initiated, among other things, by the works of Boris Hessen [Hessen 1931/2009], Michael Polanyi, Gerald Holton, and Paul Feyerabend. In this sense, the social philosophy of science is not something that suddenly fell from the sky; it grew out of previous trends but was not articulated using these terms. For the traditional philosophy of science, it was essential to distinguish between scientific knowledge and science, as it exists in society, either as an institution, or as a certain ideological, cultural program. Members of the Vienna Circle argue that science exists as knowledge and at the same time as a cultural project. They distinguished between these concepts and assumed that there were people who might well be satisfied with the logical picture of scientific knowledge, who develop this concept expressing indifference to all social aspects of the existence of science (Rudolf Carnap). And there were people who could not tolerate this and wanted to develop science in the Enlightenment spirit, as a means of transforming society, since scientific knowledge has priority truth over all other types of knowledge and allows us to fight obscurantism, idols of reason, false worldviews, and religion (Otto Neurath).

When the era of dominance of the classical philosophy of science ended, the confrontation between these two spheres lost its former relevance. This was preceded by a stage when both of these spheres were studied equally thoroughly, but practically without reference to each other (logical

empiricism, on the one hand, and the history and sociology of scientific knowledge, on the other). The sociology of science and the sociology of scientific knowledge paid attention to what the philosophy of science refused to study. There were, on the one hand, institutes, and on the other hand, intellectual manifestations of science, which did not fall into focus when science was viewed either as the implementation of formal logic or as a set of protocol sentences. Such concepts arose as implicit knowledge, a picture of the world, a style of thinking, a paradigm, a theme, a tradition. First of all, attention had focused on social representations in science: David Bloor's book was entitled "Knowledge and Social Imagery" [Bloor 1976].

What did the sociology of scientific knowledge begin to do? It studied the relationship between scientific knowledge in the traditional sense and cognitive elements that have not traditionally been included in science but exist in society. Quite a long period of their separation is very well recorded in the works of many scholars, whose books are permeated with the idea of separating the socio-cultural sphere from the sphere of scientific knowledge. This fixes the very stage in the development of the philosophy of science when these areas oppose each other. Gradually, intellectuals began to understand that there was no confrontation here, that scientific knowledge could not exist in any other way than in social and cultural forms and images. It is a different matter how attentive the view of a researcher of science is, how deeply she penetrates into the content of scientific knowledge, not in understanding the scientific truth itself, but in order to see behind this scientific truth: that it is produced by men and in their communication with each other, that all this is done in a society which carries specific historical, epochal traits without any chance of leaving the scene.

There are many examples of this. Just recently, I discussed with my colleagues a book written by a nineteenth-century historian of science that touched upon the controversial topic of whether Galileo was actually tortured or not [Wohlwill 1877]. In it, the author presents and interprets a large set of literature on the subject in order to unequivocally prove why and how this was and might be important. It is well-known that Galileo, under the Inquisition's pressure, abandoned his thesis that the Earth revolves and abandoned the whole concept of heliocentrism. What kind of pressure was it? If he was not tortured, then he was persuaded in a rational or other way that the concept was false. If he were tortured, he would highly probably have renounced anything.

So, the activities of scientists do not differ from the activities of other people in the sense that they all live in society, they all experience the oppression of social needs, the prospects of social illusions, and the impact of ideals and norms that exist in society and intervene in science. At the same time, science, becoming a fairly influential social institution, itself transmits something into society. And here it is already highly difficult to draw a rigid distinction between scientific knowledge, as it exists independently of everything else, and scientific knowledge, as it is woven, completely imperceptibly to the vast majority of people, into our daily lives. Here arises the figure of a researcher who proposes to study all this by means of natural science and to reduce scientific knowledge either to some activity of the brain or to the activity of the human body, or to reduce it to the data of the social sciences and humanities, which intends to explain scientific knowledge on the basis that a person or group are cultural entities. A philosopher has to work together with scholars and scientists, inspiring and contributing to their efforts, illuminating the dead-ends, warning about contradictions and limitations, and criticizing concepts and arguments. Last but not least, a social philosopher of science recognizes making this interdisciplinary discourse a matter of public relevance and attention in terms of the current social and cultural controversies as her professional and vocational duty.

References

Fleck, L. 1935/1979. Genesis and development of a scientific fact [transl. F. Bradley, T. J. Trenn]. Chicago: University of Chicago Press.

Hessen, B. 1931/2009. The Social and Economic Roots of Newton's *Principia.* In: *G. Freudenthal, P. McLaughlin (eds.), The Social and Economic Roots of the Scientific Revolution,* Boston Studies in the Philosophy of Science 278, Dordrecht: Springer Science+Business Media B.V.: 41–101.

Bloor, D. Knowledge and social imagery. Chicago: University of Chicago Press,1976.

Wohlwill, E. 1877. Ist Galilei gefoltert worden? Eine kritische Studie. Leipzig:Verlag von Duncker & Humblot.