Commentary on Ilya Kasavin’s “Towards a Social Philosophy of Science: Russian Prospects”

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Ilya Kasavin’s paper¹ argues for a renewed conception of the philosophy of science. He laments what he sees as the present division of labour, which gives philosophy of science responsibility for the logical and methodological analysis of scientific knowledge, while the history, sociology and psychology of science are conceived as separate domains of enquiry, each with its distinct subject matter.

Kasavin’s Project

Kasavin proposes a more holistic vision inspired by a range of Russian thinkers—including Hessen, Shpet, Vygotsky, Bakhtin, Ilyenkov, Fedorov and Vernadsky—who all offer profoundly holistic views that seek to transcend familiar oppositions between mind and world, individual and social, nature and culture. The Russian tradition yields “a more realistic image of knowledge as a complex, self-developing, human-dimensional system that can be separated from its context only by abstraction” [p. 6; translation corrected—D.B.]. Thus we cannot put the study of the philosophy, history, sociology and psychology of science into different silos. They need to be properly integrated, and when they are, philosophical insight will both inform and issue from the study of science in its various dimensions.

To illustrate his position, Kasavin invites us to consider “megaprojects”, which, in contrast to the historical and sociological case studies so characteristic of contemporary Science and Technology Studies (STS), are endeavours of such “technical complexity and political-economic significance”, that they cannot be understood without a philosophical vision. He takes as his example the building of the Kara-Kum Canal in the Stalin era, a project that, though its primary purpose was the irrigation of desert lands, had its origin, Kasavin argues, in Peter the Great’s ambition to construct a water transportation route that would unite northern and southern Russia and open up further routes to Persia, India and China. Such massive undertakings cannot be treated as if they are merely scaled up versions of smaller engineering projects. On the contrary, they present distinctive problems of explanation and analysis, and carry within them profound philosophical significance that any attempt to understand them must bring into view.

This is even more true of what Kasavin calls “global projects”, such as Isabella of Castile’s sending Columbus on his voyage of discovery, a project of truly world-historical significance that “intertwines science and everyday life, traditions and innovations, history and geography, the spontaneous inhomogeneity and constructive purposefulness of development, national mentality and the spirit of an epoch” (12). Any hope of understanding such phenomena requires more than a multi-disciplinary collaboration. It demands a “transdisciplinary reorientation” animated by the right philosophical sensibility—creative, open and holistic.

Unity? But What Unity?

How plausible is Kasavin’s optimism that the requisite philosophical sensibility is to be found in the Russian tradition? The difficulty here is that while it is relatively easy to say what the many and various Russian thinkers he presents jointly dislike, it is far harder to articulate a positive vision that they share. As Kasavin brings out, they all dismiss representationalist conceptions of mind and correspondence theories of truth; reject scientism; distrust views that are sceptical of human creativity, and disdain those that fail to countenance the fundamentally social character of mind. It would be wrong, however, to suppose that anything like a common philosophy emerges from their work. Russian cosmism, for example, is a million miles from Ilyenkov’s Marxism. It is true, of course, that all these thinkers (with the probable exception of Bakhtin) look to philosophy for a unifying vision and represent knowledge as a oneness with reality achievable by individuals only in community with others. But there is little unity in their respective ways of developing such insights.

Kasavin invokes the distinctively Russian notion of “integral knowledge” as a unifying theme, representing it as introduced at the turn of the 20th century by a number of Russian thinkers, including Shpet and Solovyev, and subsequently taken up by Vygotsky and Bakhtin. But the notion of “integral knowledge” actually derives from the 1850s and the work of Ivan Kireevsky, one of the key figures of the Slavophile movement, and while it found various expressions in the ideas of later thinkers, it is hard to liberate it entirely from its original associations with Orthodoxy, the Russian Soul, and the transcendence of reason. These are not ideas usually associated with Vygotsky or Bakhtin, let alone Ilyenkov. We do not doubt that there is much in the Russian tradition that could contribute to the revitalization of philosophical conceptions of science, but there remains a good deal of work to be done to make this explicit.

Case Studies

Kasavin is concerned that STS is overly focused on case studies that only rarely make philosophical contributions. Of course, it is implicit in the idea of a case study—as opposed to a study of purely antiquarian interest—that it illuminates something larger than itself: it should provide a case of something general, abstract or fundamental. Whether STS’s case studies make philosophical points will depend in part on the boundaries of philosophy, although certainly STS has helped to reshape ideas of such things as scientific argumentation and objectivity, of relations between theory and experiment, and of the application of science, all of which are important to the philosophy of science and technology.

One of the effects of ethnographic and historical case studies in STS has been to show how philosophy has often relied on idealized visions of science and technology that line up poorly with science as it is actually practiced. Philosophers have often based their views on textbook or other whiggish accounts of scientific practice, accounts that tend to draw scientific beliefs toward presently accepted truths. We might see this in terms of a kind of distance between philosophical views and actual practice. STS has replaced whiggish accounts by relentlessly constructivist ones: STS looks to how things are constructed from the ground up. The concrete details of materials, actions and representations matter to scientific and technological constructions.
Megaprojects

One of the risks of doing empirical studies is that they may not turn out to be of any larger significance. To guard against that, Kasavin, as we observed above, turns to what he considers an empirical topic of intrinsic significance, a megaproject.

Construction on the Kara-Kum Canal, running from the Amu Dar’ya River across the Kara-Kum Desert, began in 1954 under Stalin and was completed in 1988. As Kasavin describes, the canal was one of the largest engineering projects undertaken by the Soviet Union, is one of the longest waterways of the world, permitted the irrigation of what could become valuable agricultural land, and led to extensive development in Turkmenistan. Kasavin argues that the real origins of the canal lie in the era of Peter the Great, who in the early years of the eighteenth century saw commercial and political possibilities in the creation of a navigable waterway through the Kara-Kum Desert. The canal would form an important leg in the passage from the heart of Russia to India. Although Peter did not progress beyond preliminary surveying of the possible canal bed and building a few necessary political alliances, Kasavin suggests that the idea remained alive through the eighteenth and nineteenth centuries, an element of a general Russian enthusiasm for hydraulic engineering. Is the implication of the line drawn from Peter the Great’s Kara-Kum Canal to Stalin’s Kara-Kum Canal that megaprojects like these can have lives of their own?

For Kasavin, we should not assume that megaprojects are the products of economic opportunities or political circumstances. The Kara-Kum Canal did not depend on a calculation of costs and benefits, but instead issued from acts of will: first Peter’s, who did not have the power to bring it into being, and then Stalin’s, who did. Here lies a kind of romanticism in Kasavin’s account, which fuels his impatience with merely technocratic approaches to megaprojects (exemplified in his article by the Danish authors who attempt to address the anarchic tendencies of megaprojects by deciding how best to budget, plan and execute them). What needs to be understood, is that, while born of pure will, the Kara-Kum Canal was built by workers who, in Trifonov’s image, were doing a kind of practical philosophy as they reshaped space and time, a kind of embodied metaphysics. Nature was mastered and transformed to human ends, most immediately the ends of Soviet society. The result is something of almost unbelievable grandeur and gravitas, producing experiences of what David Nye (following Perry Miller) calls the “technological sublime”, in which the individual human agent is dwarfed by the scale of megaprojects as the social giant unleashes its Promethean aspirations to reshape nature to human ends.

Yet to support Kasavin’s picture we surely need to study the details of how the Kara-Kum Canal and other megaprojects are actually realized. Kasavin offers us a unifying vision, but it yields an a priori narrative, illustrated by literary texts (Platonov, Trifonov) rather than close study of historical detail. STS’s current, and very different, sensibility would suggest a need to drill down into the details of megaprojects to understand how they are made, how they work and don’t work, and how they are understood. What traces and records were left of the project imagined by Peter the Great, how were they interpreted and reinterpreted over the course of hundreds of years, and how, if at all, did they influence Stalin’s project? In what
sense are these two projects connected? Planning the canal was begun under Stalin—and it is certainly plausible that the canal arose out of his force of will—but the digging, blasting and pouring of cement did not begin until after Stalin’s death, and continued for more than thirty years before the project was complete. Why did Stalin’s canal not suffer the fate of Peter’s? What important decisions, obstacles and compromises gave the canal its eventual shape?

No doubt it is only the kind of philosophical vision that Kasavin applauds that draws us to the subject matter about which we ask these questions, but it is only by attention to empirical detail that we stand a chance of answering them. But it is precisely the kind of case studies favoured in contemporary STS that have taught us a lot about the profundity and complexity of the empirical study of science and technology. We should not scorn that legacy, as Kasavin sometimes seems to, and embrace instead a diet of speculative narratives and *a priori* reflections, but find a way to ensure that a due appreciation of philosophical richness of our subject matter informs our efforts to bring out its empirical reality in all its depth and richness. That, we contend, is the guiding principle that must inform any attempt to rethink the nature of case studies or the role of philosophy in contemporary studies of science.

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