

THE CHALLENGE TO CONSENSUS: THE RELEVANCE OF THE LAKATOS-FEYERABEND DEBATE FOR CONTEMPORARY SCIENCE AND TECHNOLOGY STUDIES

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Responding to comments on “Imre Lakatos and the Inexhaustible Atom: The Hidden Marxist Roots of History and Philosophy of Science,” an argument is made for reviving a missed opportunity for integrating sociological and normative approaches to science. Lakatos’ mature philosophy of science, though jettisoning a political commitment to Marxism, retains a dialectical approach developed during his Hungarian career. Through his carefully crafted debate with Feyerabend, Lakatos continued to promote a dialectical approach that offers a useful model for integrating the history of science and normative assessments focused on the viability of approaches that challenge dominant perspectives.

Keywords: Imre Lakatos, Paul Feyerabend, Marxism, dialectics, science and technology studies, social epistemology

КОНСЕНСУС ПОД УГРОЗОЙ: О ЗНАЧЕНИИ ДИСКУССИИ ЛАКАТОСА И ФЕЙЕРАБЕНДА ДЛЯ СОВРЕМЕННЫХ ИССЛЕДОВАНИЙ НАУКИ И ТЕХНИКИ

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В ответе на комментарии оппонентов обсуждается необходимость возвращения к казалось бы утраченной возможности интеграции социологического и нормативного подходов к науке. Зрелая философия науки Лакатоса при отказе от политической составляющей марксизма сохраняет диалектический подход, разработанный в венгерский период его творчества. Через свои скрупулезные дискуссии с Фейерабэндом Лакатос продвигает диалектический метод, который предлагает полезную модель совмещения истории науки и ее нормативной оценки. При этом он фокусируется на разнообразных подходах, которые бросают вызов господствующим установкам.

Ключевые слова: Лакатос, Фейерабэнд, марксизм, диалектика, СТС, социальная эпистемология

I am very grateful for the careful and critical responses to my paper, which include useful discussion of Russian language literature on Lakatos’ Hungarian background. The responses raise two general issues regarding Lakatos’ philosophy of science and its relevance for studies of science today. First is the historical question regarding the extent to which Lakatos carried over a dialectical approach rooted in the Hegelian Marxism of his Hungarian period into his mature philosophy of science. Second is the philosophical



or theoretical question that asks to what extent this reappraisal of Lakatos' work suggests better ways to integrate the sociology of scientific knowledge with normative or methodological approaches to science.

I argue that Lakatos was well situated to synthesize the approaches of Kuhn and Popper because he brought to their work an approach to the history of science rooted in dialectical Marxism that went beyond Shabarshina's imprinting or Porus' heuristic stimuli, though Lakatos had certainly abandoned Marxist politics. I also argue that Lakatos and Feyerabend's development of a more or less self-consciously dialectical approach offers a useful model for integrating the sociology of scientific knowledge with normative, critical accounts of the development of science.

I argue that their approaches are closer than they appear when viewing them through the lens of their celebrated clash between rationalism and relativism (or anarchism). Porus is certainly right that one axis of continuity is Lakatos' continued commitment to rationalism, whether dialectical or critical, and here Feyerabend remained a firm critic. However, if we see Lakatos and Feyerabend as developing criteria for when outside criticism of established perspectives is warranted, this big, abstract difference shifts to a more concrete, but still significant, difference in their assessment of whether minority positions should gain a greater hearing.

Lakatos allowed that degenerating programs could recover and become progressive again so that it could not be irrational to knowingly pursue "risky" strategies with the promise of high rewards. His emphasis was on the existence of multiple perspectives within established science of the past few centuries, and he was admittedly more critical of some established programs, such as sociology or environmentalist approaches to intelligence. **By contrast, Feyerabend was willing to consider more unorthodox perspectives deserving consideration and support, from the evolving Marxism of Lenin, Trotsky, and Luxemburg to parascientific programs like witchcraft, alchemy, or Aristotelian physics that departed from a strictly materialistic worldview associated with modern science [Feyerabend, 1976, p. 315, 318–319; on Marxism as a science, see also Lakatos; Feyerabend, 1999, p. 106–107].**

In *Method and Appraisal in the Physical Sciences*, Lakatos and Feyerabend came closest to their planned debate, *For and Against Method*. In the opening essay, Lakatos outlines his Methodology of Scientific Research Programs and his general approach emphasizing rational reconstructions of the trajectories of theories in the history of science. Historiography starts with "basic judgments" of significant scientific achievements and incorporates as much of the "external" sociology of knowledge internally within a theory of knowledge as possible. [Lakatos, 1976, p. 22, 33–34]. This amounts to case-based reasoning now common in science and engineering ethics, close to Toulmin's approach despite Lakatos' criticisms that Porus discusses [Lynch; Kline, 2000; Jonsen; Toulmin, 1988].



Feyerabend, in the concluding essay, denies that reconstructions on this basis can distinguish rational and irrational theory appraisal *in a moment of time* and also observes that one already has to be convinced that science of the last few centuries is epistemologically superior to other traditions. If one accepts this point, as Hume accepts induction as a custom internal to forms of life in which one participates, then the difference between the two views diminishes [Feyerabend, 1976, p. 323, n. 44]. For Feyerabend, Lakatos' internalist perspective, properly developed, does not escape from the "sociology of knowledge," but merely "provides standards that aid the scientist in *evaluating* the historical situation in which he makes his decisions; it does not contain *rules* that tell him what to do" [ibid., p. 328, 323].

Thus, Feyerabend recognized that if one sets aside Lakatos' rhetorical flourishes on behalf of rationality, we are left with a dialectical account of the history of science that brings the sociology of knowledge and accounts of competition and development of research programs together. As Kasavin puts it, "the clear-cut boundary between the sociological (external) and the methodological (internal) resides into the framework of science itself, when earlier it demarcated the science and the non-science"¹. In contrast to Porus' sharp distinction between methodology and sociology, Kasavin's reflections on how "metaphysical realism" can function like commodity fetishism to block the development of new (constructed) objects of science provides a good example of how normative insights can be gleaned from the sociology of scientific practice.

Shipovalova similarly shows how this turn to material practice in recent science studies, particularly via the historical epistemology of Rheinberger, indicates how the constructed, material objects of science can continue to evolve with the advance of laboratory practice, providing a demonstration that "reality is necessarily conceived as indefinite and inexhaustible" in science. Like Kasavin, and perhaps unlike Rheinberger, Shipovalova recognizes that Feyerabend's greater emphasis on hybridity and proliferation in science better support Lakatos and Feyerabend's shared normative commitments challenging the dominance of single paradigms, especially when these paradigms make common cause with dominant social ideologies. Feyerabend's analysis here resonates with Lakatos' Hungarian dissertation, with its emphasis on how capitalism's idealist ideologies and the silos of distinct, national traditions in science impede the interaction and progress of scientific programs [Kutrovátz, 2002].

For Feyerabend, Lakatos' approach never makes possible decisive, normative judgments but does transform the history of science into a dialectical account of the emergence of reason in human history. The

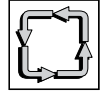
¹ Note also that Kasavin's point that Lakatos' MSRP "comes pretty close to a descriptive sociology of the scientific knowledge" is precisely Feyerabend's [1976] argument. See, also, Lakatos' [1976, p. 2, n. 1] rejection of the view that the internal/external distinction corresponds to an intellectual/social history distinction.



result is that “history has been transformed to such an extent that a slight change in our standards, say from research programme standards to Hegelian standards, enables us to read it as a history of reason itself” [Feyerabend, 1976, p. 330]. As a historical point, Lakatos and Feyerabend’s correspondence on these resonances with Hegelian and Marxist dialectics and their decision to frame their public debate in this way suggest to me a stronger sense of the influence of dialectics than simply the incorporation of rational criticism that Porus observes, though establishing that definitively is beyond the scope of this exchange. What is clear is that he wished to historicize mathematics rather than preserve it as a realm of formal rationality. Thus, in 1968, after receiving a letter from Feyerabend endorsing the application of “dialectical materialism” to science, Lakatos sends Feyerabend a copy of the first page of his Hungarian dissertation and follows it up with a reference to a footnote in his *Proofs and Refutations* endorsing dialectics [Lakatos; Feyerabend, 1999, p. 148–151].

Both Lakatos and Feyerabend maintained a commitment to “Popperian” critical thinking, while accepting Kuhn’s point that scientists generally neglect (and generally should neglect) the “ocean of anomalies” surrounding scientific theories. Where Kuhn saw this as grounds for deference to established expertise [Fuller, 2000], Lakatos and Feyerabend saw this as implying that one has more freedom to pursue positive projects rather than just fighting off negative objections [Feyerabend, 1970; Lakatos, 1976, p. 10].

For Lakatos, his background developing a Marxist sociology of scientific knowledge meant that he had no objections to the “conventional” character of knowledge espoused by Popper, but sought only to trace how long a positive heuristic could last before being exhausted. Perhaps this readiness to read Popper in light of both his familiarity with Lukácsian Marxism and the Hungarian heuristic tradition played a role in the specific form of Lakatos’ philosophy of science, as Shibarshina argues [Dusek, 2015]. What I would suggest is that the reception of Lakatos in Anglo-American philosophy was distorted by a lack of familiarity with the concepts Lakatos was trading in and the result was a sharp, ideological split between rationalist or realist philosophy of science and the new sociology of scientific knowledge that waited a generation to be reconsidered [Fuller, 1988; Rouse, 1987; Harding, 1991; Longino, 1990].



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