

Vesa Oittinen's essay on the political and epistemological controversy that burst out between Bogdanov and Lenin at the beginning of the twentieth century, and culminated in the latter's *Materialism and Empiriocriticism* (1909), has the merit to draw our attention to a context, from which we can still derive important philosophical lessons, especially relative to the ontology of the sciences, social epistemology and the politics of truth.

Early twentieth-century Russian reflections on scientific knowledge mediated between Kant, Marx and Mach. Neither Marxism nor neo-Kantianism benefit today from a hegemonic position in the philosophical debates on science but at the turn of the last century they certainly did. They had their roots in German philosophy and were deeply transformed in the cultural and political climate of revolutionary Russia (Steila 1996). Later, during the Cold War, their legacy shaped relevant strands of meta-reflection on science, most importantly, externalist approaches to science and forms of historicizing epistemology (Ienna & Rispoli 2019, Winkler 2013 and Rheinberger 2007). In Anglo-American academia, after WWII, neo-positivism, logicism and analytical philosophy together with internalist historiography were established as the most influential paths to the philosophy and history of science for ideological reasons. Yet, their abstractness and the difficulty to create coherent university curricula in the history and the philosophy of science have forcefully reopened the field of science studies to alternative knowledge theories capable of bridging the gaps, in particular historical epistemology (Engler & Renn 2018, Omodeo, Ienna & Badino 2021).

The crux of the Lenin-Bogdanov controversy was ontology. Lenin's criticism of Mach's philosophy, which invested Bogdanov's *Empiriomonizm*, especially concerned the idealistic biases of conventionalism. According to Lenin, Machism posited the existence of an insurmountable wall between the knower and the object of knowledge. As this epistemology assumed that there is a radical separation between the subjective realm of phenomena and the Kantian thing-in-itself, it renounced materialism. Lenin attacked such agnosticism concerning the world in itself, because it made science prone to conservative agendas, including ideological and theological ones. By contrast, he defended the relevance of the material and objective character of scientific knowledge. He was explicit about the political meaning of such position. If we want to transform the world, we need to know it (Omodeo 2020). This concerned not only the natural sciences but also the social sciences. The class struggle has to rely on an objective evaluation of the power relations in society, therefore it cannot rest on methodological conventions that are uncommitted about the reality of their object of investigation.

This insights have not lost their relevance. In recent years, post-truth populism has evidenced the political weaknesses of constructivist positions (the heirs of conventionalism, including social constructivism of knowledge and post-modern subjectivism). The challenges of anti-science are forcing science studies to shift the meta-reflection on the sciences from mere consideration of their intellectual and cultural aprioris to the ontological problem of their referents (Pellizzoni 2019). In other words, political ontology has never been more urgent than today.

Bogdanov was attentive to the political dimension of epistemology, too, but from a different angle. As Oittinen stresses, he articulated his philosophy in closer connection to an analysis of the sciences. Bogdanov especially based his knowledge theory on considerations on the historical advancement of the sciences, the social formation of their concepts and their methods. He especially pointed out the practical roots of all knowledge, which he explained against the background of the metabolism of society in its relation with natural resources. Such relation is a world-transformative technoscientific one, rooted in societal structures and labour. In this respect, Bogdanov proves an important reference author for current debates about the man-made world of the Anthropocene, a time in which humanity has become a driving geological force (Rispoli 2014, Renn 2020).

Moreover, the Lenin-Bogdanov controversy is very instructive as it makes the political significance of knowledge theory emerge. Both struggling parties were aware that the stake was the establishment of a scientific and philosophical culture for an emancipated socialist society. While Bogdanov's scientific efforts were directed towards a systemic comprehension of reality, one that has labour at its center, Lenin enhanced praxis as the basis for both our comprehension of the world and its transformation. Accordingly, the problem of political direction was the cornerstone of his analysis. But, of course, it is only the connection of scientific knowledge and collective agency that can offer an effective world-transformative philosophy and politics, one that can accomplish the leap forward from natural necessity to praxeological freedom.

Although this Russian context has been neglected by philosophers of science for long time, the present predicament calls for its reassessment as an alternative avenue to epistemology than the dominant ones. Indeed, our time is marked by an unprecedented crisis of scientific culture (signaled by phenomena like post-modern relativism, post-truth skepticism, and scientist ideologies) (Oreskes and Conway 2012). Thus, it calls for more civil engagement on the part of scientists and a thorough reconsideration of the politics of science. Oittinen's essay offers us a fresh look at a seminal debate on science and its foundations that can help us achieving the much-desired integrated paradigm for the study

of the roots, legitimacy and objectives of science, that is, a full-fledged historico-political theory of science as a social and cultural praxis (Omodeo 2019).

References

- Engler, F.O. and Renn, J. 2018. *Gespaltene Vernunft: vom Ende eines Dialogs zwischen Wissenschaft und Philosophie*. Berlin: Matthes & Seitz.
- Ienna, G. and Rispoli, G. 2019 *Boris Hessen at the Crossroads of Science and Ideology. From International Circulation to the Soviet Context*. In *Boris Hessen and the Dialectics of Natural Science*, ed. S. Winkler. Thematic issue of *Societate si politica / Society and politics* 2019/1. Open Access (<https://socpol.uvvg.ro/boris-hessen-at-the-crossroads-of-science-and-ideology-from-international-circulation-to-the-soviet-context/>) (accessed on 26 November 2019).
- Omodeo, P.D. 2019. *Political Epistemology: The Problem of Ideology in Science Studies*. Cham: Springer.
- Omodeo, P.D. 2020. The Struggle for Objectivity: Gramsci's Historical-Political Vistas on Science against the Background of Lenin's Epistemology. *HoST: Journal of History of Science and Technology* 14/2: 13-49.
- Omodeo, P.D., Ienna G. and Badino M. 2021. Lineamenti di Epistemologia Storica: Correnti e temi. *Preprints of the Max Planck Institute for the History of Science – Berlin*, n. 506.
- Oreskes N., Conway E.M. 2012. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. London: Bloomsbury 2012.
- Pellizzoni, L. 2019. Innocent, Guilty or Reluctant Midwife? On the Reciprocal Relevance of STS and Post-Truth. *Tecnoscienza: Italian Journal of Science & Technology Studies* 10/1: 115-130.
- Renn, J. 2020. *The Evolution of Knowledge*. Princeton: Princeton University Press.
- Rispoli, G. 2014. Between 'Biosphere' and 'Gaia': Earth as a Living Organism in Soviet Geo-Ecology. *Cosmos and History: The Journal of Natural and Social Philosophy* 10/2: 78-91.
- Rheinberger, H.-J. 1997. *Historische Epistemologie zur Einführung*. Hamburg: Junius.
- Steila, D. 1996. *Scienza e rivoluzione: La recezione dell'empiriocriticismo nella cultura russa (1877–1910)*. Florence: Casa editrice Le Lettere.

Winkler, R.-L. 2013. *An den Ursprüngen wissenschaftssoziologischen Denkens. Erstes Drittel des XX. Jahrhunderts (Russland/Sowjetunion)*. Berlin: trafo Wissenschaftsverlag.

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