An Organic Logic of Research: A Response to Posey and Navarro

Sandra Harding, University of California Los Angeles


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The review by Kamila Posey and María G. Navarro of *Objectivity and Diversity: Another Logic of Scientific Research* is so generous to me and to this book. They clearly grasp arguments that have simply puzzled others (at best!). It is rare to get such a fine review of a book that, as they note, is challenging mainstream ways of thinking about the production of knowledge and ways of justifying it.

My only hesitation is that Posey and Navarro are *too* generous. A number of the positions that they attribute to me are ones that appeared first in writings of other authors. And I am not just being gracious here. Some of these authors are advocating for the knowledge production needs of social justice movements around the globe—postcolonial, indigenous, and feminist. Others are critically revisiting the role that political interests played in the history of the Vienna Circle and subsequent emergence of logical positivism (logical empiricism).

**Challenging Mainstream Philosophy and Scientific Methodology**

The claims I make represent broadscale challenges to mainstream philosophy and methodology of science projects that have been emerging for decades, but have been ignored in much of today’s mainstream epistemology and philosophy of science. I intend to draw attention to the convergences and divergences in these various accounts, while emphasizing that all of them undermine the continuing relevance and legitimacy of much contemporary analytic epistemology and philosophy of science. My kind of epistemology, methodology and philosophy of science starts with everyday, lived knowledge—production problems for socially, politically, and economically vulnerable groups. Such lived knowledge-problems help in building a theory that explains and moves past such problems.

To begin with challenges and alternatives arising from significant social justice movements, here is Edward Said (1978, 15-16) writing almost four decades ago about the colonial knowledge-production projects that Orientalism set in motion:

> Orientalism depends for its strategy on this flexible positional superiority, which puts the Westerner in a whole series of possible relationships with the Orient without ever losing him the relative upper hand … [T]here emerged a complex Orient suitable for study in the Academy, for display in the museum, for reconstruction in the colonial office, for theoretical illustration in anthropological, biological, linguistic, racial, and historical theses about mankind and the universe, for instances of economic, and sociological theories of development, revolution, cultural personality, national or religious character.

Postcolonial theory, with its subaltern studies component, went on to reveal the mutually supportive projects of colonialism and modern Western sciences. Mary Louise Pratt’s (2008) influential *Imperial Eyes* argued that the sciences that were established as natural history in the

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1 I am aware, however, that space considerations undoubtedly limited their ability to report the full lineage of these positions.
eighteenth and nineteenth centuries could never achieve the observational “innocence” (the “just the facts” objectivity) that the persistently claimed as they emerged from scientist-explorer travels in Africa and Latin America.

Today vigorous networks of indigenous knowledge advocates have emerged around the world. The indigenous movements of the Andean highlands succeeded in 2006 and 2007 in getting nature’s legally defensible rights into the new constitutions of Bolivia and Ecuador (Walsh 2010). Latin American “decolonial” movements and their theorists, such as Boaventura de Sousa Santos (2014) and Walter Mignolo and Arturo Escobar (2010), have been especially aware of the importance of such non-modern alternatives to modern Western sciences, and that no social justice is possible without epistemic justice. Santos has insisted that modern Western philosophies of science commit “epistemicide” when they disvalue the experiences of the majority of the world’s peoples.

**Political and Economic Interests and the Unity of Science**

Posey and Navarro (2016) refer to a second main source of my thinking in their opening to the last paragraph of their review, and here and there elsewhere in the review, though the source is not visible. This series of historical studies revealed that more local and deeply held political interests shaped U.S. philosophy of science in the last century and especially since World War II. For example, George Reisch’s (2005) *How the Cold War Transformed the Philosophy of Science: To the Icy Slopes of Logic* tracked the shifting political choices made by the Vienna Circle’s philosopher/scientists. This shift occurred when they encountered the anti-communism (and anti-semitism) of McCarthyism and the Cold War in the United States when they arrived as refugees from fascist Germany and Austria.

The proclaimed unity of science of the Vienna Circle was initially a plea for scientific attention to solving social problems that fascism was already beginning to “solve” in its own hideous ways. In the U.S. this plea to all scientists was turned into a thesis about the nature of science: it is unified, with physics at the top of its hierarchy as its purest model, they proclaimed. Descendants of the resulting logical positivism (or logical empiricism) still dominate the U.S. philosophy of science world. Nancy Cartwright et al (2009) also explore the politics of the Vienna Circle’s thinking.

Another influential history is David Hollinger’s (1996) analysis of the political causes of the “autonomy of science” arguments promoted by leaders of the U.S. scientific community at precisely the moment when the U.S. government was first massively investing in scientific research, beginning with the Manhattan Project’s atomic research and then the founding of the National Science Foundation. These scientists were fearful of Congressional and popular intervention in their choices of research topics and processes. Philip Mirowski (2004) develops a longer historical view of how the philosophies of science of John Dewey, Hans Reichenbach, and Philip Kitcher align with the dominant economic assumptions of their particular political eras. These are all sceptical accounts of claims to the value-neutrality of philosophies of science that are made from within contemporary philosophy and history of science.

Meanwhile, accounts of the disunity and pluralism of modern Western sciences, such as those by Galison and Stump (1996) and Kellert, Longino, and Waters (2006) further
undermined the fact and value of the unity of science thesis by identifying the immense linguistic, ontological, and epistemological diversity even within supposedly single sciences, such as biology, for instance. Such diversity is required by both the ongoing emergence of nature's properties (such as retroviruses, ozone holes, dark matter in space, and tectonic plates) and constantly evolving social needs, as well as the continuing ability of scientists to reconceptualize their observations in light of these two sources of novelty. As Galison (1996) points out in his essay, unity and disunity have long taken on distinctive local meanings through their usefulness in political, cultural, and social discourses. Unity and disunity represent different values and interests in different contexts as evidenced, for example, by the United States—not to mention the recent challenges to the European Union. Of course for the anti-colonialists, “unity” is associated with exclusion from or assimilation into Eurocentric cultures.

Finally, the standpoint methodology that I have helped develop has a distinctive intellectual history that begins with Marx and Engels’ proletarian standpoint. However, beginning in the 1970’s, several feminist sociologists and political philosophers transformed the Marxian insight into a usable one for natural and social scientists. These researchers were trying to understand how it could be that their research, clearly directed by feminist values and interests, was both producing empirically and theoretically more reliable and valid results of research, and yet also disobeying basic disciplinary principles for doing good (i.e., maximally objective) research. (cf. Smith 1990, Hartsock 1983, Rose 1983, and Harding 2004.) Yet, this methodology also appears to have a different kind of legacy (or, perhaps, a more extensive one): it tends to arise every time a new group “steps on the stage of history.” One thing such groups invariably say is that the world looks different from the perspective of their daily, lived experience. Thus, standpoint approaches to research seem to exemplify a kind of organic research methodology—“Another Logic of Scientific Research”—as the book’s subtitle notes.

Conclusion

Recognition of the development of these now widespread analyses leads one to recognize that it takes a lot of epistemic, philosophy of science and methodological work to keep them appearing irrelevant in those particular fields today. Clearly powerful social, political, and economic institutions have strong interests in keeping this work sidelined. In this context I especially value Posey and Novarro’s attention to my attempt to help remedy this situation.

Contact details: sharding@gseis.ucla.edu

References

S. Harding


