

Bevir's final socialist group, the ethical socialists, were moved more by concerns to create a new organic society that would allow for greater individual fulfillment than they were by economics or politics. Some became involved with utopian communities that tried to create the new society by example. But they did not, Bevir argues, see socialism as a surrogate faith, as many historians have argued. Rather, like many late-nineteenth century individuals who retained a religious faith, they were moved by the growth of immanentist beliefs that saw God in everything. 'Ethical socialism and liberal welfarism did not provide a new home for old religious emotions so much as emerge as part of a new set of religious beliefs' (220), Bevir concludes.

What I missed in these case studies was two things. In his concern to divorce the development of socialism from the working class – and of course most of the famous early socialists were middle class – Bevir largely ignores the impact of the major political and social developments of the period, with certain exceptions such as Bloody Sunday or the birth of the Independent Labour Party. But the impact of working-class socialists like Tom Mann, or of working-class protest, or of related developments in social theory (the work of Charles Booth, for example) are absent from the narrative. So, too, are ways that the socialists he examines may have been in conversation with more than the particular historical traditions that Bevir focuses on. Evangelicalism and liberalism may have been key to the mid-Victorian period, but by the late-nineteenth century surely social Darwinism was the greater force, to take only one example.

Overall, however, this is an original and important book. Bevir's detailed case studies of this cluster of late-nineteenth-century socialists are all based on original primary research. They are each in their own way attempts to revise prevailing historical views, and in many cases they succeed in doing that. Much of what Bevir describes will not be new to specialists but the overall effect will be. The book is thus an important contribution to the historiography that all historians of the period will want to read.

Peter Weiler
Boston College
© 2012 Peter Weiler

Mary Jo Nye, *Michael Polanyi and His Generation, Origins of the Social Construction of Science* (Chicago, IL and London: University of Chicago Press, 2011), 432 pp., \$45.00/£29.00 (hb). ISBN 978-0-226-61063-4

Mary Jo Nye's book, published late in 2011, is a thoroughly researched, carefully organized, and well-written account, showing how the 'social conception of science' (xv) that became popular in the 1960s is rooted in the 1930s. Michael Polanyi, born in 1891, was a talented scientist and a figure deeply immersed in the debates and turmoil in European science and society for much of the twentieth century. He was educated as a physician but soon shifted to research in chemistry. Beginning in the 1930s, however, his research interests increasingly expanded to include discussions in economics, philosophy of science and cultural criticism. By the late 1940s, he had given up scientific research in favor of his new vocation as a philosopher and cultural critic, which he pursued until his death in 1976. This book is an outgrowth of Nye's long-standing interest in Polanyi, who here represents the first of three generations of 'pioneers in the social epistemology of science' (xx).

The detailed historical narrative focuses on Polanyi's life, work and ideas as a vehicle to illuminate how social studies of science emerged and developed in the twentieth century. Some of the discussion, especially in later sections of the book, shifts to comparison with other first generation figures (e.g., Fleck, Mannheim, Bernal and Merton) as well as some second generation (Kuhn, Ziman, Ravetz and Edge) and more recent third generation figures (Collins, Shapin, Latour). Although Nye's book is not a Polanyi biography, it does helpfully complement some of the material in the 2005 Polanyi biography by Scott and Moleski (*Michael Polanyi, Scientist and Philosopher*) because it so deeply roots Polanyi and his account of science in his social and scientific context.

Nye's opening chapter treats Polanyi as a member of the refugee generation of Hungarian scientists. She adeptly sketches Polanyi's early life and education in a prosperous secular Jewish family in largely tolerant Budapest. All of that began to change with the death of his father. Then World War One, and, in quick succession, the post-war liberal, communist and right wing anti-Semitic Hungarian governments provided shocking experiences that influenced his subsequent political thought. Polanyi's first emigration in 1919 to Weimar Germany brought an exciting and challenging life in a new scientific context in the very prestigious Kaiser Wilhelm Gesellschaft (KWG) scientific institutes. His happy thirteen years in Berlin as a talented young researcher living among the century's scientific giants, Nye argues, 'gave him the experience of what he later transformed into an idealized vision of the scientific research community' (83). Nye describes not only the scientific high culture that Polanyi participated in, but also the economic and political turmoil in this period and its bearing on Polanyi's developing ideas and his career. Ultimately, the Third Reich and the dismantling of the KWG led to Polanyi's necessary but reluctant second emigration in 1933 to Manchester, which as a scientific center never quite measured up to Berlin. There are two chapters carefully discussing in some detail the several overlapping areas of research that Polanyi pursued in Berlin and Manchester; Nye shows how Polanyi's research and his successes and disappointments decisively shaped Polanyi's ideas about such matters as the value of the inexact and the role of recognition and authority in science.

In another chapter, Nye focuses on economic discussions from 1910 to 1940 and ways in which Michael and his brother Karl Polanyi took positions at odds with each other. She argues that Michael Polanyi's economic views color his account of both scientific organization and the ethos of science, but that Michael also learned from his brother about the importance of institutions. From about 1940, Polanyi was vigorously engaged in activities aimed at defeating the Left-inspired 'planned' science movement in Great Britain. Nye carefully portrays the British debate and its connection with related matters such as Soviet science and the Lysenko affair; she sets forth descriptions of Polanyi's allies and opponents, showing how questions about the freedom of science and social responsibility play through the 1940s. Particularly interesting is Nye's comparison of the views of Polanyi with his arch opponent J.D. Bernal. She shows they had more in common than they admitted.

The seventh chapter is an extended discussion of the similarities and differences between Polanyi, Popper and Kuhn; Nye provides historical detail about Popper and Kuhn and interactions among these three figures, all of whom were critical of the dominant empiricism, inductivism and logical positivism. After providing an overview of the argument in Polanyi's *magnum opus*, *Personal Knowledge*, the last chapter of the book compares the largely negative reception the book received among philosophers of science with the more positive reception among sociologists interested in science. Nye links her account of *Personal Knowledge* and Polanyi's life and views with the ideas of an array of figures including Holton, Lakatos, Feyerabend,

Mannheim, Merton, Ziman and Ravetz. The short epilogue turns to what Nye dubs the third generation of those promoting the 'social epistemology of science' (295). Briefly, she outlines some of the views of Edge, Shapin, Collins and Latour and the so-called strong program in sociology of science. Running through this final discussion is an interesting comparison of the views of Polanyi and Kuhn (and some others in the first two generations) and this third generation of thinkers.

In sum, Nye's book is a very solid scholarly achievement. She carefully defines the scope of her project – to show the staged development of the social studies of science, using a detailed account of Polanyi's life and work as a backbone for this larger discussion – and effectively makes her case. I would note (as does Nye at the beginning of her book) that there are comprehensive elements of Polanyi's thought that are understandably underplayed in a study focused on Polanyi and the origins of the social construction of science. The influence of Gestalt thinkers like Köhler on Polanyi's views seems more important than Nye indicates. Polanyi's peculiar notions about 'public liberty' are a key to the way his early economic and larger social philosophy fit together. The newly-opened Edward Shils Papers at the University of Chicago provide some interesting details on matters such as Polanyi's conflict with the US authorities when he wished to emigrate to the US in the early 1950s. These comments, however, are not meant to diminish my admiration for Nye's accomplishment.

Finally, I hope this excellent study will lead readers to look at Polanyi again. It is worthwhile contemplating broader themes such as Polanyi's sharp cultural criticism of modernity (rooted in his reading of the history of ideas) and his anti-Cartesian philosophical turn, which can be aligned with figures like Charles Sanders Peirce, Heidegger, Merleau-Ponty and, more recently, Charles Taylor. His thought leads us toward a richer understanding of life as well as of science.

Phil Mullins
Missouri Western State University
© 2012 Phil Mullins