

European Journal of Sociology

<http://journals.cambridge.org/EUR>

Additional services for *European Journal of Sociology*:

Email alerts: [Click here](#)

Subscriptions: [Click here](#)

Commercial reprints: [Click here](#)

Terms of use : [Click here](#)

EUROPEAN
Archives Européennes de Sociologie
JOURNAL
Europäisches Archiv für Soziologie
OF SOCIOLOGY

TOME LIV 2013 NUMÉRO 3

Critical Studies

CAMBRIDGE
UNIVERSITY PRESS

The Younger Polanyi. Mary Jo Nye, *Michael Polanyi and His Generation: Origins of the Social Construction of Science* (Chicago, University of Chicago Press, 2011)

Karl Hall

European Journal of Sociology / Volume 54 / Issue 03 / December 2013, pp 577 - 582
DOI: 10.1017/S0003975613000441, Published online: 22 January 2014

Link to this article: http://journals.cambridge.org/abstract_S0003975613000441

How to cite this article:

Karl Hall (2013). European Journal of Sociology, 54, pp 577-582 doi:10.1017/S0003975613000441

Request Permissions : [Click here](#)

Mary Jo NYE, *Michael Polanyi and His Generation: Origins of the Social Construction of Science* (Chicago, University of Chicago Press, 2011)

MICHAEL POLANYI (MIHÁLY POLÁNYI), the Hungarian chemist and philosopher of science who is often credited with helping to bring the study of practices onto the agenda of science studies in the 1960s, learned at an early stage of his career just how disruptive commercial chemistry could be to his high-minded understanding of the scholarly enterprise. Although the mature Polanyi became a steadfast critic of the mounting pretensions of technology as applied science, in his writings this defender of the prerogatives of academic science would largely obscure the practical experience of the young Hungarian medical officer and freshly minted chemistry PhD who in 1916 found himself on extended furlough for health reasons. One way the invalid kept busy was with chemical consulting at the urging of his brother, then the manager of an industrial laundry. That year Polanyi and his uncle, along with Artur Rényi—engineer, son-in-law of the president of the Hungarian Academy of Sciences, and future father of the famous mathematician—filed for Austrian and Hungarian patents on certain wool processing techniques, hoping to obtain a contract with firms like the Hungarian Woolen Wares, Military Cloth and Blanket Factory in Zsolna to help it efficiently extract a decidedly unglamorous resource: raw lanolin (the German *Wollfettschlamm* is far more evocative). Although the patent was not especially successful, it did generate much-needed income, and it would be years before Polanyi extracted himself from the consulting contract, one of many that he entered into during the early stages of his career.

Moralizing about the science-technology relationship was a recurrent pastime at the height of the second industrial revolution—if perhaps not so prevalent as we might imagine in the age of the Bayh-Dole Act—with important consequences for founding debates in science studies in the 1960s and 1970s. In the most famous instance, Thomas Kuhn offered up “normal science” as a way of talking about the sociological particularity of shared ideas and practices, one which appealed to the subjective communal aspects of science but left philosophers fuming about its impoverished sense of universal

“scientific method.” This was but one way to make science look more like other aspects of culture. Yet one could also take normal science in a manner that more readily assimilated it to technique, by positing a view of scientific method as a sort of portable managerial skill mastered by a few leading scientists, where the actual daily labor of science is performed by what amounts to technicians of the laboratory rather than the industrial workshop. Polanyi’s philosophy is perhaps more important to this second sense than to the first. The ambiguity served Kuhn well, but it has muddled our study of “practices” as the methodological basis of local knowledge. Much of the thrust of the turn to practices after Kuhn was to displace universalist epistemologies in favor of local forms of knowledge production, whether in narrow ethno-methodological terms or—as Polanyi argued—tied to broader sociological conceptions of tradition and authority. The thoroughgoing imbrication of science and technology that this has encouraged is surely a good thing for science studies, yet as Mary Jo Nye’s ambitious *Michael Polanyi and His Generation* demonstrates, we still struggle to reconcile these two senses of what Steve Fuller has called science-as-community and science-as-industry. The Polanyi of Nye’s account is far more attuned to community than industry. The result is one of the richest synthetic accounts to date of how a variety of interwar figures from beyond the precincts of philosophy contributed to the rise of science studies. The world of the industrial laboratory remains on the periphery, however, and certain artful lacunae in Polanyi’s own work remain unchallenged as a consequence.

It is the considerable virtue of Nye’s book that she rescues the younger Polanyi from the older Polanyi and those of his followers who insist on dignifying his every pronouncement solely through the lens of philosophy. This is not to say that she is merely recovering him for a conventional disciplinary history of chemistry—far from it. Nor is she really intent on constructing a methodological counter-narrative to a wholly philosophical critique of Polanyi’s relevance to science studies. Instead she argues that Polanyi’s prior experiences both as chemist and émigré would crucially inform his normative account of scientific practice as something deeply conservative (in the sense of Karl Mannheim). Kuhn as reluctant harbinger of social studies of science can thus be historicized as the generational successor of a broader matrix of British and Continental cohorts well beyond the ambit of logical positivism, with Polanyi as the central node of these conjoined themes. (Whether Polanyi’s was a “generation” in the sense of Mannheim is not addressed.) We might say that Nye has set out to write

a contextual history of contextual history of science, seeking to demonstrate “how the major problems and solutions in twentieth-century epistemology of science were embedded in historical events and political cultures.” The problem is that the sense of “practice” which inhabits this book is all too close to the elder Polanyi’s own: apart from invocations of an elusive émigré sensibility we never get a proper account of how Polanyi acquired a particular understanding of sociality in his own early career as a scientist, nor do we see how the sociality of Polanyi’s prewar generation was taken onboard by Nye’s own generation of historians of science—other than to rehearse in condensed form the very journal debates from the 1960s to 1980s in which Polanyi the philosopher became an established, if ultimately somewhat marginal, figure for science studies.

While the first chapter doubles as a biography of Polanyi’s early life, it mostly serves to establish a tightknit Hungarian intellectual network that was both in the making before 1919, but is then defined for present purposes by its experience as a refugee generation after 1933. There is too much flash-forwarding to 1939 and later, as if to suggest that the reader would only recognize the importance of Polanyi in a Kuhnian (read: Anglophone) frame. The total effect is distracting and unfocused, given that the second chapter then settles into a fascinating description of Polanyi’s career in Berlin during the 1920s. That chapter also offers a potted history of Weimar science and politics in the capital—the Berlin “jungle” in the words of a Karlsruhe friend—but dwells largely on the “harmless monkey colony” of Dahlem’s privy councilors, the setting where the young Polanyi truly came to thrive. It is here that the reader begins to get a sense of the crucial role of Fritz Haber’s famous colloquium in Polanyi’s socialization as a scientist and laboratory manager. Yet while emphasizing Haber’s route to scientific prominence via new forms of engagement with industry, Nye does not devote much effort to exploring Polanyi’s own contacts with industry, beyond cursory mention of his ongoing consulting work at Siemens in Berlin and Osram in Budapest.

This problem does not stem from mere indifference on Nye’s part, since telling details do crop up in the narrative. She relates the visit of British science journalist J.G. Crowther to Dahlem in 1930, where Haber informed him, “there [is] no split between the scientific and commercial side.” Yet Haber’s claim is not pursued in any detail, much less challenged. The story Nye tells is of Polanyi’s pressing need to escape these ties to industry, and not how those ties were historically constituted. We find Polanyi extolling Haber as chief

legislator of the “city” or “republic” of science in 1928, without learning whether this sort of philosopher-king talk had any bearing on Polanyi’s more famous reflections on the Republic of Science three decades later. In the end, Nye quietly participates in Polanyi’s own idealization of Weimar Dahlem as a scientific research community, occasionally gesturing toward the possibility that *this* is what needs deconstruction within a larger frame of commercial science—but never pursuing the matter further. A later discussion of Polanyi’s views on pure vs. applied science similarly stops short, citing Philip Mirowski’s sharp criticism of Polanyi’s authoritarian exemption of scientists from broader forms of social accountability in a lesser-known 1961 essay, but sidestepping engagement with the work itself as the product of an erstwhile commercial scientist.

The third and fourth chapters play to Nye’s strengths as one of our premier historians of chemistry, and they are especially useful for narrating contemporary physical chemistry beyond the frame of quantum mechanics and the initial triumphs of Heitler-London theory. Nye delves further into Polanyi’s career as a chemist striving to make it to the first tier, dwelling mostly on his work in surface chemistry and X-ray diffraction. She deftly parses Polanyi and Irving Langmuir’s rival accounts of adsorption, and opens up themes of reward, recognition, and authority, to be revisited to good effect in later chapters. It was Polanyi’s work on chemical reaction rates with Henry Eyring that secured his scientific reputation, and Nye’s clear exposition serves as a marvelous reminder of why we should be paying more historical attention to what Polanyi called the sciences in the middle, between the “open research” driven by atomic physics and the world of factory secrets. In these chapters the nature of the social remains ambiguous, however. Nye emphasizes that Polanyi would later call upon these experiences “to illustrate the social character of recognition and reward for scientific discoveries and scientific theories.” But she is never very intent on clarifying just what she means by the “social,” which is to say that Polanyi’s own imprecision is not interrogated in this regard.

“Modern science,” wrote Polanyi in an essay on “The autonomy of science” in 1945, “is a local tradition and is not easily transmitted from one place to another [...] Those who have visited the parts of the world where scientific life is just beginning know of the backbreaking struggle that the lack of scientific tradition imposes on the pioneers [...] However rich the fund of local genius may be, such environments will fail to bring it to fruition. In the early phase in question New

Zealand loses its Rutherford, Australia its Alexander and its Bragg, and such losses retard further the growth of science in a new country.” (What Hungary lost from its emigrating Martians went unmentioned.) In short, science was for Polanyi a local enterprise “which can only be transmitted from one generation to the other through the medium of personal collaboration.” What Polanyi meant by “local” varied a great deal. In philosophical terms he subsequently emphasized “personal collaboration” in contrast to assertions by logical positivists to the effect that the theoretical precepts, experimental techniques, and material artifacts of science could all be cast in a global, neutral, ahistorical observation language. In historical terms, however, his emphasis on the local was not consistent, and in this case he plausibly located this scientific tradition in “Europe.” Fair enough, but this is not very local.

I dwell on this rather obvious point because in a sense it is deeply embedded in Nye’s own historiography, beginning with her readiness to postulate that there was such a thing as *a* “scientific culture in Europe” during Polanyi’s chemical career. She is not alone among students of Polanyi in failing to question his own elegiac account of a lost prewar Central Europe where one could travel freely and “the cultural unity of Europeans was complete.” Polanyi is treacherous here precisely because we seek the sources of his philosophy in his historical experience, but it is difficult to reconcile this post hoc personal memory with the many failures of Central European liberalism(s) already before 1914. In this respect Nye is not prepared to do for Polanyi what Malachi Hacoen has done for Karl Popper in Vienna, and this leaves the Hungarian’s philosophy only weakly tethered to the history until she arrives at the more familiar British Marxist debates of the 1930s. Despite nuanced reflections on the problem of “national style” in her earlier work, Nye does not adequately problematize regional differences in this book, beyond relating Polanyi’s profound regret at being forced to abandon the elite social relations of the Haber institute in favor of dreary Manchester.

To be sure, Polanyi’s Hungarianness is something of an obstacle here, much as it was for the Anglophone biographers upon whom Nye relies for much of her information about his early career. Yet it is not my intention to offer comfort to those who might think that only a Hungarian speaker could capture the “full” Polanyi as a product of local historical circumstances. The real problem is that Polanyi’s own mobility qua scientist is never tied to questions of locality and transmission in his subsequent philosophy of science. The repeated

foreshadowing of Polanyi's Anglophone reception (a contextual dominant), while irritating at times, is not ultimately the problem, but rather the nagging suspicion that there are too *many* contexts, no one of which is rendered with the kind of fine-grained argumentation that could establish its historical necessity and philosophical sufficiency to the dual task of persuading the reader that concepts of "social construction" are at once the product of Polanyi's generation and simultaneously the best means by which to grasp their actions. *Michael Polanyi and His Generation* affords us an excellent entrée to its subject's continued relevance for science studies, but I continue to think that the history of "social construction" remains intimately tied to principled disagreements about a problem where Polanyi was not the most reliable of informers, precisely because of his readiness to conflate cognitive and moral virtues: whether technology should be expelled from the Eden of science.

KARL HALL