
Never Pure: Historical Studies of Science as if It Was Produced by People with Bodies, Situated in Time, Space, Culture, and Society, and Struggling for Credibility and Authority by Steven Shapin

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Steven Shapin's place amongst the great historians of science of the 20th century was secured with the publication of *Leviathan and the Air-Pump* [1985], co-authored with Simon Schaffer, which used the exclusion of Thomas Hobbes from membership in the Royal Society as a springboard for considering several overlapping senses in which the science/non-science boundary was decisively constructed in Restoration England. More generally, instead of casting the 'Scientific Revolution' as the period when the modern institutions of science were founded on secure epistemological principles, Shapin portrayed it as a kind of historiographic mirage, a retrospective rationalization of many relatively independent decisions taken of the sort that excluded Hobbes from the Royal Society. In effect, Shapin showed that without the menacing presence of Hobbes, who advanced an especially fierce philosophical scepticism towards the capacity of experiments to resolve metaphysical disputes, the Royal Society would not have become the institution that it is today. If previous histories had made it seem as if the Scientific Revolution would have happened sooner or later, Shapin's history reveals that it was so path-dependent that our belief that such a revolution even occurred relies on our remaining convinced that the exclusion of Hobbes had been the right move—or put more generally, that science, as the Royal Society's Charter states, excludes considerations of politics, religion, metaphysics, and so forth.

This is heady stuff, the full measure of which even now has yet to be taken. For an obvious conclusion to draw from Shapin's body of work is that not only the Scientific Revolution but also 'Science' itself—especially when understood as the singular achievement

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canonized in Herbert Butterfield's *The Origins of Modern Science* [1949]—is a historiographic mirage. However, in the book under review, a collection of 16 occasional pieces published over the past quarter-century that visit most of the major themes of Shapin's career, any such radical conclusion is resisted—despite its intimation in the final chapter. Indeed the author forsakes the rhetorical example set by the confrontational Hobbes for the tactful example of Hobbes' great nemesis, the chemist Robert Boyle, whose own circumspect and prolix manner becomes Shapin all too well. Thus, surrounding the often interesting things that Shapin has to say about the past, the reader is treated to feats of 'boundary maintenance' concerning what it is to be a good historian of science in the Steven Shapin mould. Here a highly labored style of writing is deployed to perform scholarly virtues that go by names like 'careful', 'accurate', and 'rich', which Shapin in turn noticeably bestows on colleagues every so often [ch. 1–2]. Where Shapin worries that his positions might cause offense, he is always quick to show that they were unintended, byproducts of trying to uphold the norms that his opponents presumably share with him. After all, as the Royal Society taught, mutual recognition is the key to mutual protection. It is easy to see how Harvard could come to like such a chap.

Wading through the 200,000+ words of courtly prose that comprise the essays in this book, it is easy to lose sight of the animus driving Shapin's work, let alone how it ever could have been seen as threatening to the scientific orthodoxy. (Lest one forget, a substantial part of Paul Gross and Norman Levitt's notorious Science War salvo, *Higher Superstition* [1994], was devoted to a debunking of *Leviathan and the Air-Pump*.) The key to understanding Shapin is to imagine him as being to the sociology of scientific knowledge what Heidegger was to phenomenology—namely, someone whose overriding concern is to tie thought to the situatedness of the human condition. Indeed, very much like Heidegger, Shapin endows the sites of scientific work with enormous mystique and authenticity [ch. 5–6]. To be sure, Shapin is often simply reporting the attitudes held by, say, the gentlemen of the early Royal Society who engaged in experiments. But these attitudes also carry over to Shapin's own sense of what it means to conduct a decent scientific life. It is clear that he prefers the self-effacing, convivial yet clever Robert Boyle to the arrogant and solitary genius that was Isaac Newton, and that any useful

medical advice doled out by René Descartes owed more to the common sense of the day than to his distinctive metaphysical views [ch. 15]. Indeed, Shapin regards the claims to intellectual purity made by solitary scholars—especially philosophers—as self-deception, if not a manifestation of that supreme deception, the aspiration to universal transcendental knowledge, aka divinity [ch. 7–8]. Here the reader can begin to see how the early Shapin could have been associated with a vaguely Neo-Marxian account of science as a kind of craft guild oriented to specific social interests. While in the 1970s this view may have appeared to demystify science as a form of abstract knowledge, today it is more suited to underwriting the integrity of grounded scientific practices.

But it would be a mistake to see today's Shapin as a nostalgic defender of the guild values upheld by what Derek de Solla Price originally called 'little science' [1986]. In perhaps the most revealing essay in the book [ch. 10], Shapin argues that the best way to understand the bulk of American social science research in the 20th century which appeared to demonstrate the alienation of scientists who worked for industry is as a projection of the social scientists' own anxiety that they could be true to their vocation only in an academic culture that was now beset by the 'military-industrial complex'. For their part, natural scientists who moved between academia and industry did so with relative ease, sometimes even blending into corporate culture. Shapin's sympathies clearly lie with the amiably adaptive natural scientists. He suggests that the concern expressed by social scientists for the scientists' chameleon-like tendencies perhaps masked their own underlying resentment or envy of their subjects. In any case, Shapin argues, the clear, abstract, and influential formulation of the scientific ethos produced by Robert Merton—which makes no reference to sites of scientific work—dates from this general development. Rather than as a forthright albeit utopian ideal of the scientific enterprise, Shapin suggests that the Mertonian norms be read as the manifesto of a segment of knowledge workers—social scientists—who felt increasingly isolated in a rapidly changing American society. Interestingly, but keeping with his longstanding Mary Douglas-tinged view that politics is the symbolic enactment of cosmology [Douglas 1970], Shapin ignores the line of thought initiated

by Everett Mendelsohn [1989] that reads Merton as a liberal ideological translation of J. D. Bernal's Marxist call for a united worldwide class of scientific workers.

An interesting short book could be written that used Merton's four norms of the scientific ethos as a meta-scientific Rorschach test, since virtually every sort of opinion has been expressed about them by virtually every major theorist of science of the past 50 years. That Shapin sees the norms as a symptom of social science's alienation from the social world is not surprising. The sociology of scientific knowledge—and science studies more generally—has an undeserved reputation for being 'anti-science'. Indeed, Shapin himself shows that many of the field's characteristic theses have precedents in scientists' own spontaneous meta-scientific pronouncements [ch. 3]. However, from its start, the sociology of scientific knowledge has always targeted normative philosophy of science, especially of the sort that tends to persuade scientists that they are society's intellectual superiors. From this standpoint, social scientists look like naïve literalists, perhaps even fundamentalists, *vis-à-vis* doctrines that scientists themselves use opportunistically if not abandon in practice. Of course, it remains an open question, which Shapin refuses to address head on, whether science as the signature institution of the modern world can survive without such philosophical resolve. But then that may not be his concern.

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