

Ted Porter, Dorothy Ross. *The Modern Social Sciences*. Cambridge: Cambridge University Press, 2003. 762 S. \$160.00 (cloth), ISBN 978-0-521-57244-6.



Reviewed by Mary Lindemann (Department of History, University of Miami)

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Changing Times

If Herbert Butterfield were alive today, he would have found it difficult to recognize his history of science in this impressive book, a recent contribution to Cambridge University Press's series that, in a projected eight volumes, will trace science from ancient times through the end of the twentieth century. Butterfield, writing in 1949, had no qualms about the term "Scientific Revolution" and indeed endowed that event with unique importance as "the real origin of both the modern world and of the modern mentality." [1] This volume presents a very different picture that reflects, as such a volume should, the state of play in the history of science at the end of the twentieth and the opening of the twenty-first century. To put it bluntly: the Scientific Revolution is gone, at least in the form once widely accepted. The authors in this volume eschew the phrase, which appears only, or almost only, as a foil. And yet, no one denies that change was in the air and each of these fine articles demonstrates "pell-mell change at every level." The "transformations that occurred between about 1490 and 1730 were huge" (p. 13). They did not, however, constitute a single program or arise from a unique plan, nor did they lead inexorably to modernity. Still, much was new and "new" was

fast becoming a term of praise rather than opprobrium [and] novelty became its own justification" (p. 16). This perception anchors the framework of the entire volume. But this editorial guidance is not strait-jacketing, and although the thirty-three chapters generally cleave to this one orientation, the contributions themselves are original and varied in their perspectives and argumentation.

The historical gurus of early modern science are no longer the enthusiasts of the middle decades of the twentieth century—Butterfield, Alexandre Koyrë, and E. A. Burt—but Bruno Latour, Simon Schaffer, Steven Shapin, Mario Biagioli, Nancy Siraisi, Anthony Grafton, Londa Schiebinger, and the editors themselves. Even Thomas Kuhn's famous paradigm shift, which once captivated historians of science and ideas, merits only the briefest of mentions, twice in the text although not for his book, and once in a footnote. To a large extent, the history of science has evolved into a study of a set of cultural practices, a complex event that includes social networks and multiple forms of intellectual and material production (including artisanal and casual) that is particularly concerned with the meaning(s) of truth, evidence, and

proof. Thus, the history of science here represented is a comprehensive, complex, and—at least for this reviewer’s taste—a far more interesting enterprise with a more compelling program and greater immediate relevance for all scholars interested in the early modern world more generally.

But if the approach is new, the baby does not go out with the bathwater. Although the volume as a whole explores a large number of sites where science was “done” and introduces an astonishing array of characters who “did” science in the early modern period, from artisans to alewives to instrument makers and on, familiar names still stud many pages. Galileo Galilei, Christiaan Huygens, Rene Descartes, Isaac Newton, Andreas Vesalius, Robert Boyle, and their compatriots have not gone missing. They are, however, surrounded now by a throng of individuals and groups; some known, some little known, and some totally anonymous. More important, the position and the contributions of the “greats” are re-evaluated but not diminished. Finally, early modern science is portrayed as intimately linked to a by-no-means benighted and alien medieval past. Several contributions demonstrate how much at pains the “scientists” of the sixteenth and seventeenth centuries were to achieve an accommodation with older wisdom and *scientia*. The attraction of those venerable authorities began to wane only in the middle of the seventeenth century, as “more and more voices argued that the old edifice of natural knowledge needed to be torn down and a new one constructed,” and even then no unanimity existed about “what the shape of that new edifice might be” (p. 9).

The book is organized into four sections—“The New Nature,” “Personae and the Sites of Natural Knowledge,” “Dividing the Study of Nature,” and “Cultural Meanings of Natural Knowledge”—that, as the editors admit, represent “a compromise between early modern and modern categories” (p. 9). Park and Daston propose a strategy for assimilating the massive amounts of information and subtle arguments that are packed into what is a very large book, counseling their audience to read part 3 “in tandem” with part 2. This method combines a consideration of sites and locales of knowledge with practitioners, including the canonical ones. I suspect, however, that most people will dip into the book, selecting specific chapters, say, on “Natural Philosophy” or “Medicine” to obtain background for further investigations or to plunder for lecture notes. Both aims are perfectly valid ones, but it would be a mistake to employ the volume solely as a crib or convenient and reliable encyclopedia, although it would be a vast improvement over Wikipedia! When

I thought about how I would read the book in order to review it, I first believed that it might make sense to proceed erratically, picking and choosing, until I finally had read everything, or else to follow the sensible program the editors sketch. But I quickly jettisoned both plans and plowed through the volume from cover to cover, and am glad I did. One encounters some repetition, but it is only occasionally bothersome, such as the section on astrology in “Astronomy” that has been covered in the immediately preceding treatment of “Astrology.”

The real value of the volume, in my eyes at least, is its contribution to *early modern* history. I came away from the experience with a finer appreciation for how early modern peoples thought and how their societies worked. Admittedly, some articles delve deeply into technical matters, such as those on pure mathematics or on the mechanical arts, but these, too, repay careful perusal. Take, for instance, the treatment of “Acoustics and Optics.” While perhaps not all early modern scholars will find discussions of laws of refraction and diffraction fascinating, the article demonstrates the critical role artisans played in the development of both sciences as well as providing an explanation of how one science, optics, constituted a “more unified discipline” than another, acoustics, while allowing us to peer into how practitioners of both sciences organized themselves, sought their helpers, instrument makers, for example, and came to be understood as separate endeavors. Although other pieces address social contexts more directly, such as Bruce Moran writing on “Courts and Academies,” Alix Cooper on “Homes and Households,” Londa Schiebinger on “Women of Natural Knowledge,” or Steven Shapin on “The Man of Science,” to name a random few, the centrality of context and constructivism becomes even more striking by their inclusion in explaining evolutions and developments in more “purely” technical fields.

The breadth and range of the volume is breathtaking and, hard as I tried, I could think of little that was lacking. Perhaps one might have found an article on time useful, as clocks play a significant role, but virtually the entire social and cultural panorama of early modern society receives intelligent and sophisticated coverage. Geographically, the work as a whole is quite evenhanded and even eastern and northern Europe are discussed, if only briefly, which perhaps quite accurately reflects the state of the field. Some otherwise excellent individual articles, however, are somewhat narrow in their geographical reach, such as Adrian Johns’s article on “Coffeehouses and Print Shops,” for instance. The assemblage of authors is equally impressive. When first asked to review this

volume, I wondered “Why me?” I am not a historian of science, but rather a social and political historian with an interest in medicine. One reason is probably that all the appropriate reviewers of the work, the many first-rate historians in the field today, are included within its covers. Then again, the volume is not really written for historians of science, although such historians will read parts with profit, but rather for the early modernist more generally. That is how I approached the volume and why I judge it such an extraordinary accomplishment. Al-

though the book lacks a bibliography or a list of “Further Reading,” the dense footnotes hold a wealth of materials. Despite its horrific price, it should be mandatory reading for every early modernist, no matter his or her particular scholarly orientation.

Note

[1]. Herbert Butterfield, *The Origins of Modern Science, 1300-1800*, revised edition (New York, Free Press, 1965), 8.

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