

story of those who acted, but equally, if not more, it is the story of those acted upon. Their lost or submerged, repressed memories, especially when those in power have tried to obliterate them, are essential for a more complete, more accurate version of the past. Cohen has moved beyond his own field work in Subsaharan anthropology to become a distinguished theoretician working at the intersections of anthropology and history. He advocates as well as represents a more dynamic and sensitive understanding of the past, and challenges us to become more flexible in our attempts to understand the interrelationship between the past and the present. He speaks especially for those who have forgotten their past under the press of those above them. We must, he asserts, "keep in view the multiple and laminate representations of the past. . . to preserve the folds and layers of production that join the past to the present at every second" (p. xxii). No anthropologist or historian, regardless of focus or specialization, can afford to ignore Cohen's warning, lest we destroy the essence of those whom we would understand.

That said, it seems logical to expect a book on methodology to be methodical. But this work defines that logic. Instead, it becomes a veritable mirror of the culturally complex, subtle nuances and "laminations" which Cohen urges us to discern and sort through in every historical situation. Those familiar with his work will find few surprises here. It is, by his own admission, largely a reweaving of materials from his earlier writings. At its core is his unpublished but widely circulated typescript position paper, "The Production of History," which he prepared for the "Fifth International Roundtable in Anthropology and History" (Paris, 1986). Only chapter three ("The Economy of Debate") appears to be new, with its fruitful discussion of how best to organize (and therefore to understand) African history, interrupted by about eight pages of commentary on Germany's *Historikerstreit*. Cohen suggestively describes how the two topics, despite their superficial differences, represent similar challenges to the historian. Both reveal ways by which history becomes a construct of memory: either conveniently acknowledged and supported, despite (or perhaps because of) its distortions, out of guilt, fear, and unwillingness to admit to truth; or, unless retrieved from repressed memories and brought to the surface again by the historian, ultimately lost. This volume's value and Cohen's greatest service is in providing his readers with this sensitivity and these unexpected but telling juxtapositions and comparative viewpoints.

Also valuable are its frequent references to seminal statements for such an approach—by Herbert G. Gutman, Gabrielle Spiegel, and Jan Vansina, to name but three—and numerous instances of its practice. For example, Cohen cites the Tübingen folklorist Utz Jeggele's work on local memory and the persecution of Jews in the Nazi era, observing that any effort to uncover and create a valid history of the Holocaust invariably affects "all those professionals and publics outside Germany who would measure, weigh and judge the actions of Germans both remembering, and refusing to remember, their past(s)" (p. 69). This becomes yet another way of demonstrating the urgency of the lessons of the Holocaust for all of us. Cohen's vision of the intricacies of human society reminds us that as we construct the frame on which our stories about the past are woven, we inevitably give them a shape and texture of our own making. Until historians and anthropologists fully recognize this, we will remain either harmlessly irrelevant and unpersuasive or, more dangerously, false, serving as the tools of those who would misuse our work for their own purposes.

DOUGLAS R. SKOPP

*State University of New York at Plattsburgh,
U.S.A.*

Trust in Numbers: The Pursuit of Objectivity in Science and Public Life. By Theodore M. Porter (Princeton: Princeton University Press, 1995), xiv + 310 pp., \$24.95/£19.95 cloth.

The subject of this fascinating study is the ever-growing authority and prestige of quantitative methods in the natural and social sciences and in public life. Porter approaches this topic as a historian of science; he seeks to understand it as a social and political phenomenon. He writes: "I do not claim that quantification is nothing but a political solution to a political problem. But that is surely one of the things that it is . . ." (p. x).

Like Kuhn, he sees science and other forms of knowledge as made by communities. However, he stresses that scientific and professional communities are seldom autonomous. They are subject to outside scrutiny and criticism. This is a particularly important source of the pressure to quantify.

Porter's thesis is that the development of quantification is associated with the pursuit of objectivity, understood as impersonal knowledge, "independent of the particular people who make it" (p. ix). This is a weak definition, as he observes,

which implies nothing about truth. The language of mathematics, he argues, is well-suited to embody objective judgments in this sense. It employs highly structured and agreed rules which all but exclude personal idiosyncrasy and subjective judgment. It is adopted when claims to knowledge need to gain trust and credibility beyond the bounds of locality and community, whether the community in question is social, professional, or scientific.

To substantiate and illustrate this thesis, Porter presents a wide range of cases drawn from many different areas. He begins with an account of the development of physical weights and measures. It is now difficult to imagine that there could be substantial disagreement about what continues a pound of flour or a hectare of land. However, as Porter shows, “in old-regime society, measurement was always a matter for negotiation” within a hierarchical social order (p. 24). A system of measures independent of local customs and practices was constructed only gradually. It involves not just the creation of standardized units of measurement but also the imposition of regular and uniform social practices. “Whatever validity scientific laws and measures may claim with respect to the external world, this has never been enough to make them operationally valid Uniformity in nature in practice is a triumph of human organization” (p. 29).

The need to standardize and quantify comes with the growth of a centralized state and the development of large-scale economic institutions. The wheat trade provides a vivid illustration. The quality of wheat varies from farm to farm. In earlier times, a grain merchant had to inspect samples personally to assess what he was buying. With the coming of the railway to the American Midwest, grain was handled in huge quantities, making such personal judgment impossible. Quality standards were needed which could be trusted by both buyers and sellers. Gradually a grading system was developed, together with a bureaucracy of inspectors trained to apply the standards in a regular way. “In the end, bureaucrats and traders managed to create what had never existed on farms, much less in nature: uniform categories of produce. Thereafter, wheat could be bought and sold on the Chicago Exchange by traders who had never seen it and never would—who couldn’t distinguish wheat from oats. They could even buy and sell futures, commodities that didn’t yet exist” (p. 48).

The central core of the book contains extended case studies of the spread of quantitative methods in two areas of economic and social life: commercial accountancy and cost-benefit analysis. In fields

such as these, it may be thought, the use of quantitative and rule-governed techniques is an inevitable and natural outcome of their intrinsically mathematical character. This is by no means the whole story, as Porter convincingly argues. He contrasts the work of nineteenth century British actuaries with that of twentieth-century American company accountants; and the different uses of cost-benefit analysis to assess public works projects by French and American civil engineers. Though the work of these groups is founded on mathematical techniques, they rejected the view that their work can be reduced to mechanical techniques. All insist on the need for professional expertise and discretionary judgment. Pressure to adopt purely quantitative and mechanical techniques came from outside, and was strongly resisted. This resistance was more successful in Europe, where these professions were part of a hierarchical social order founded on trust and deference. “Where experts are elites, they are trusted to exercise judgment wisely and fairly. In the United States, they are expected to follow rules” (p. 195).

In the final part of his study, Porter shows how similar pressures toward quantification have operated in academic disciplines. The methods of statistical analysis, developed in the social sphere, have been adopted even in well-established natural sciences, such as astronomy, to analyze observations. However, it is the weaker areas of science, such as experimental psychology and psychical research, that are the most insistent on quantifiable results. The rigid rules for analyzing and reporting data which characterize so much contemporary natural and social science are best understood, Porter argues, as ways of generating a shared discourse and unifying relatively weak research communities. They function as checks on subjective and personal judgment, and as a strategy for responding to criticism by outsiders (p. 229). They serve as alternatives to the trust and shared understandings which characterize strong and autonomous communities (p. 215).

It is impossible to do justice to the richness of this illuminating and innovative study in the space of a brief review. It should be added, however, that the book is a pleasure to read. Porter manages to make even the history of accountancy absorbing and interesting. His study sheds light on many aspects of the processes of “rationalization” in modern society, and thus vindicates the power and fruitfulness of the historical study of science and technology.

SEAN SAYERS

University of Kent at Canterbury, U.K.