

Book Reviews

Bowker, Geoffrey C. *Memory Practices in the Sciences*. Cambridge, Mass.: MIT Press (*Inside Science*), 2006. 312 p. alk. paper, \$34.95 (ISBN: 0262025892). LC 2005-50492.

Each of the nouns in the title *Memory Practices in the Sciences* is scrutinized and redefined in this interdisciplinary study by Geoffrey C. Bowker, Executive Director of the Center for Science, Technology, and Society at Santa Clara University. In two previous books, *Science on the Run: Information Management and Industrial Science at Schlumberger, 1920–1940* (1994) and *Sorting Things Out: Classification and Its Consequences* (with Susan Leigh Star, 1999), Bowker investigated the role of information practices in the industrial age through case studies. That investigation continues in this book with in-depth studies of nineteenth-century geology, twentieth-century cybernetics, and the contemporary science of biodiversity. A volume in MIT's *Inside Science* series on the sociology of science and technology, Bowker's wide-ranging work also partakes of elements of the history and philosophy of science.

Bowker's definition of memory practices is straightforward: "how we configure the world and ourselves to maintain an active memory of the past." He is dealing not so much with individual memories as with memory as a social phenomenon. He finds that some memory practices are embedded in the natural world (for example, paths through the woods that have been "blazed" by previous travelers), some are implicit in social norms, some are inscribed in laws and protocols, while still others are consciously created at a particular time and place for a particular purpose. Bowker refers to the content of a particular retention of the past as the *archive*, observing that "archives begin with inaugural acts that wipe out a past and define a period 'from now on'

as the present." A second key concept is the *epoch*, referring to the way in which past time is configured in a given archive. Each discipline, according to Bowker, has its own commonly accepted origin myth, its own archive, and classification of past time. Bowker is especially interested in the problem of maintaining a usable past given the incompatibility of these archives and the added complications of constant political, social, and technological change. He circles around the question whether science can ever know "*wie es eigentlich gewesen ist*" (von Ranke's elusive historical truth). Despite introducing some elements of post-modernism, he never abandons traditional epistemology. It's just that our memory practices make the task of knowing "how things really were" hard, if not impossible.

Bowker maintains that the discourse of each of the three sciences under investigation is structured around the latest information technology of the period. Thus the cosmology of the science of geology, as articulated by Charles Lyell, was inspired by factory production, the railroad, and the steamship. Lyell's view of the earth's history is compared to an accountant's ledger, in which nature's economy is balanced. The central metaphor of cybernetics, by contrast, is tied to computer technologies, where memory is pure pattern and all particulars are lost in an ultra abstract model that claims to subsume all disciplines and makes the past irrelevant. Finally, the information model for the science of biodiversity is the database, the creation of vast repositories of data that can be accessed, combined, and interpreted at will. Bowker does not seem to be claiming that information technology determines science or vice versa, but rather that they interact with each other, or perhaps reflect a common worldview.



Each of the three cases is explored with masterful command of both basic science and the secondary literature, although the parallels among the three cases are not always convincingly demonstrated, in my view.

Librarians may be especially interested in the section on biodiversity, with its attention to problems of creating and maintaining information in databases. Bowker believes that standards and protocols are essential, but that there is no such thing as a universal, permanent standard. The longevity of data depends on metadata and the ability to translate between disciplines. He argues for enhanced metadata that will capture the wider context in which data was created. He also makes the unpopular point—music to the ears of the library profession—that maintenance of the information infrastructure is important. In other words, more catalogers and specialists in systematics are needed. Problems in classification are explored with examples from botany, species, fossils, soils, landscape topology, and ecological communities. It is demonstrated beyond doubt that no classification system can ever be perfect, not because of human error, but because of real tensions in the definitions within the sciences themselves. Bowker cautions that to attempt to create a “global panopticon” would be misguided at best.

There has been space here to mention only a handful of the interesting ideas that can be found on every page—indeed, every paragraph—of this book. My chief criticism is that the writing is sometimes disjointed and rambling, and the many digressions and allusions to people and ideas from Plato to Proust to Derrida can be distracting. The ideal reader would need to be familiar with current theory in information science as well as postmodern theory. Nevertheless, I think that every reader will find much to ponder in this provocative exploration of the relationship of the present to the past. —*Jean Alexander, Carnegie Mellon University*

Foot, Mirjam M. *Bookbinders at Work: Their Role and Methods*. Newcastle, Del.: Oak Knoll; London: The British Library, 2006. 163 p. \$59.95 (ISBN 1584561688 [US]; 0712349014 [UK]).

Book bindings of the hand-press period (1455–1830) range in sophistication from the simple paper wrappers of a seventeenth-century child’s catechism to the extraordinarily ornate gold-tooled, red-dyed, goatskin covers created for the king of France. For us today, it is easy to see in the manner of binding either delight in ornament or its absence, the whim of an aristocratic collector, or the extravagance of a bookseller hoping to make a sale to a wealthy customer. To take just one example of early modern book decoration: books decorated with sprinkled or stained edges. Speckles were usually red, or mixed red and green or red and blue, or edges were stained in solid colors such as red, yellow, green, even black. Why these techniques? These colors? Were they an expression of a purchaser’s or a bookbinder’s mood? Were they the paints or dyes that just happened to be available at the time? Readers of Mirjam Foot’s book on binding quickly learn how naïve assumptions of randomness are. Almost every aspect of a binding is suffused with meaning and historical clues, sememes waiting to be deciphered and understood by the librarian or the historian with the eyes to see. Our presumption must always be: What greater or more subtle purpose is being served by the bookbinder’s choice? What traditions of the guild or of the culture have been respected and perpetuated? As Thomas Mann reflected in *Doktor Faustus*: “Ornament and meaning have always run alongside each other. . . . Let no one claim that nothing is being communicated.”

To stay for a moment with the example at hand: we learn in Foot’s book that sprinkled edges on books were not just decorative, but often helped hide the dirt on the edges; that red and green sprinkling said “French” to German readers; that sprinkling with red alone suggested