REVIEWS

Geoffrey C. Bowker. *Memory Practices in the Sciences*. ix + 273 pp. Cambridge, MA: MIT Press, 2006.

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This ambitious book could have been so much better.

Geoffrey Bowker is known for his astute interpretations of the roles that "information infrastructures"—standard ways of representing things—play in communication. In *Memory Practices in the Sciences*, he aims to demonstrate that institutional and disciplinary memory is shaped by the ways that people gather and store information. He has previously addressed this issue in an assessment of the international classification of diseases (1996 *Information Processing and Management* 32 (1):49-61) and in more recent works, including *Sorting things out: classification and its consequences* (1999) with Susan Leigh Starr. This time, he examines 1830s geology, 1940s cybernetics and late twentieth century biology. Bowker uses these cases to illustrate the effects that different kinds of information infrastructures have on what kinds of information are retained and which ones are lost as scientists record material for future use.

As in his previous works, Bowker presents readers with keen observations about the social aspects of which information is recorded and how. He notes that infrastructural change is usually not obvious, and that when it is, it is often presented in terms of "intellectual manifestoes epiphenomenal to the infrastructural change" —philosophical justifications after the fact (p. 13). I was also heartened by his observation that the dominant trend in information management "has been away from representing the world as a set of neatly nested entities to representing it as a set of autonomous entities" (p. 191), a development that is mirrored in the transitions in database design from hierarchical to relational to object-oriented (pp. 190-191). His writing is also peppered with quotable quotes, such as the unforgettable "Raw data is both an oxymoron and a bad idea; to the contrary, data should be cooked with care" (p. 184).

Unfortunately, *Memory Practices in the Sciences* is far from a persuasive text. Bowker presents his most clear and convincing arguments in the introduction. The case studies do not always support the conclusions he draws from them. Like Foucault, to whom Bowker refers repeatedly, he has grasped important concepts but does not have enough familiarity with the primary research in the fields from which he draws his examples to give his readers an adequate picture

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of the context or dynamics of each situation. He looks for incommensurability and finds it, whereas someone who has devoted more attention to detail would find continuity. While he has a knack for noticing significant work regardless of who wrote it, Bowker seems unfamiliar with the major players and some of the significant issues affecting classifications in the fields he discusses. The section on biology is particularly weak in this respect. Bowker cites minor works but does not mention major contributors to discussions of human perceptions of other species (e.g., Scott Atran, Brent Berlin), the crisis in taxonomy (Quentin Wheeler), or current work on parasite evolution (e.g., Dan Brooks). Some of the material he cites as current in the swiftly moving scientific fields he discusses is over 20 years old. He is also clearly unfamiliar with the origins and development of both zoological and botanical codes of nomenclature—suggesting that classification started with Linnaeus at the end of the 18th century (p. 229)—and he misrepresents how herbaria work (p. 129) and how characters are coded in cladistics (p. 214). He also does not demonstrate an understanding of the differences between gene trees and species trees (p. 215). These errors and others like them could have been caught before publication with collaboration or even editorial advice from colleagues more familiar with the disciplines examined in the case studies.

Insufficient copy-editing compounds these problems. Scientific names get mangled repeatedly. Many sentences enter Faulknerian territory with their multiple embedded clauses. Idiosyncratic uses of terminology, such as "fold" and "implode," do not improve clarity. Long, drawn-out examples often end up veering off topic as well. An entire paragraph appears in two separate chapters (pp. 121 and 174). An Al Gore quotation mentioned twice in the main body of the text has an index reference only to a third mention of it in the introduction. And someone should have told Bowker that beginning an introduction with a paragraph in seventeenth century French and the first chapter with three epigraphs in a row, two of which are multiple-paragraph mind-twisters by Thomas Pynchon, is off-putting, to say the least.

I had been looking forward to this book and I am disappointed that it was not treated with more care prior to publication. Bowker's arguments—when he is familiar with the material he treats—are sound and worth considering. It is unfortunate that the infrastructure of this book was so poorly assembled.

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