REVIEW BY PAULINA BORSOOK

Byte Blight

The Mirage of Continuity:
Reconfiguring Academic Information Resources for the 21st Century

Edited by Brian L. Hawkins
and Patricia Battin
Council on Library and Information
Resources and Association of American
Universities, 1998. 301 pages, $25.

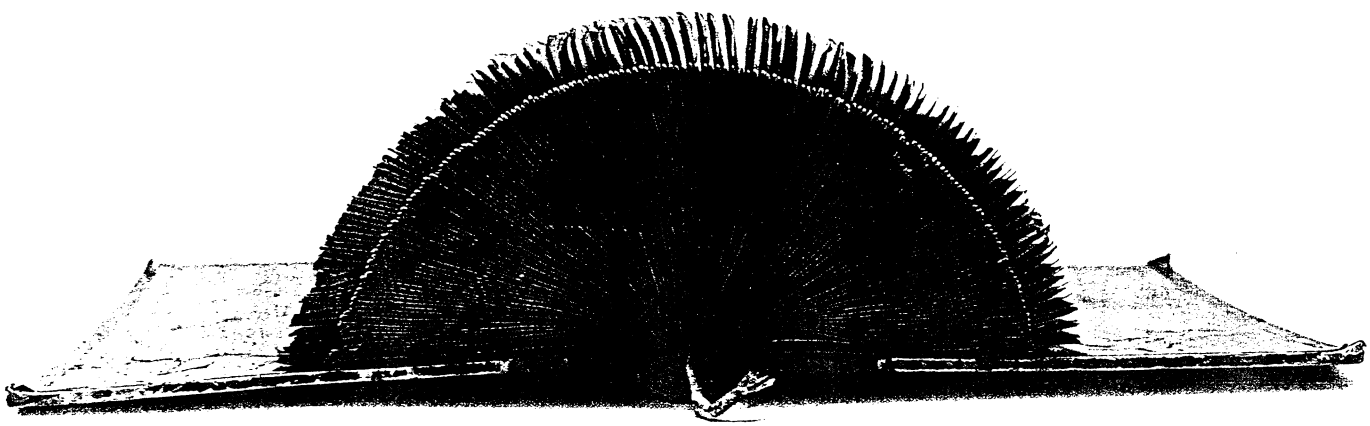

PHOTO: JOHN HALPERN

PITY THE LIBRARY DIRECTORS, THE business officers, the campus computer troubleshooters—in fact, all those people responsible for managing their institutions' libraries. They might rightfully weep when they consider that between 1981 and 1995, the average annual inflation rate of acquisitions eroded the total buying power of 89 top research libraries in the United States by almost 40 percent, even though their acquisitions budgets increased by 80 percent during the same period. They might also wince when they consider that information—however loosely defined—is said to be doubling every two to three years: In 1981 research libraries estimated that they collected about 6 percent of what was available to them; by 2001, it's projected, due to inflation and the information revolution, they will be collecting less than 0.1 percent of what's available. As if these disparities weren't enough, digital technology is making available new and different kinds of information resources, but often with great hidden costs and much aggravation. Just as maddening, fewer, not more, skilled librarians are being hired to cope with it all.

A fitful remedy to some of these ills is prescribed by *The Mirage of Continuity: Reconfiguring Academic Information Resources for the 21st Century*. "Fitful" because reading this collection of 19 essays is analogous to using that most pervasive of new technologies, the Web. There's valuable stuff to be had, but locating it requires diligence: One must surmount the sketchiness and repetitiveness of many of the selections as well as the book's dismayingly inconsistent presumptions about a reader's background knowledge of libraries and information science in the age of intelligent machines. Just as search engines can't really interrelate the results of a query, the editors of this book didn't seem to consider how well one essay related to another.

With these caveats in mind, a cautious reader of *The Mirage of Continuity* will find useful information about distance learning; the legal and philosophical controversies surrounding digital reproduction and intellectual property; and the status of libraries, universities, and scholarship in an arena that's increasingly digital. A few essays deserve special recognition. In "Universities in the Digital Age," John Seely Brown and Paul Duguid are worried about the possibility that distance learning will spawn a two-tier educational system. "An online degree will almost certainly not command the same respect as its distant campus cousin," they venture. "In consequence, despite conventional concerns about 'have-nots' lacking access to technology, technology may in fact become the only access they

have to experiences whose full value develops off-line." Which isn't to say that Brown and Duguid are opposed to distance education altogether. The Net isn't a good place to form communities, they think, though it's a good place to keep them going.

Another solid contribution is Douglas Greenberg's "Camel Drivers and Gatecrashers: Quality Control in the Digital Research Library," which maps out a useful set of distinctions between the holdings of traditional libraries and the Internet's vast but spotty archive. Greenberg is adept at explaining the significance for researchers of the unsexy but essential functions of quality control on the Internet. Students, he warns, "are likely to think that the boundary between the Net and the Library is transparent or nonexistent. Indiscriminate use of unsubstantiated data—and the lack of quality gatekeeping on the Net to distinguish it from reliable data—can threaten the very standards of scholarship and meticulousness at the core of the modern humanities and social sciences."

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Michael Lesk's "Technical Limits of Digital Libraries" delivers on its title's promise: It spells out in bits and bytes just how tough the problem of converting all print material into a digital format really is. "The ability to convert items other than language is still missing," Lesk writes. "Maps, data plots, chemical structure diagrams, mathematical equations, architectural drawings, musical scores...are difficult or impossible to convert automatically."

These and several other of the book's better essays are particularly astute because they recognize a key point: Librarians need to be skeptical of the "then a miracle happens" thinking that is, alas, much too common whenever computers are brought to bear on a problem. It is reminiscent of the thinking prevalent when ATMs were introduced in the 1970s. Then it was predicted that through the miracle of automation, banking would become painless and paperless in addition to becoming cheaper for financial institutions to provide. ATMs have made banking relatively painless, but, as we all know, banks have begun to charge for many uses of ATMs because they found that keeping networks up and running, fault-tolerant, and immune to record-keeping errors was a far more difficult and costly proposition than they had thought. It behooves university librarians and chief information officers to keep the ATM fallacy in mind when they are tempted by the latest round of hot stuff from information technology solution sellers.

The book as a whole hints at an equally crucial point: Librarians and CIOs should realize that they can't evaluate the payoffs or pitfalls of new digital resources without first grasping some fundamental distinctions among data, information, and knowledge. Data, particularly those kicked up in the physical sciences, may easily lend themselves to digital archiving—but with the drawback that technologies housing the data don't seem to have a life span of relevance and accessibility beyond five years. Information—data that have been rendered into a higher-order entity through gleaning, filtering, and coalescing—will have different performance qualities: It's not as readily digitized, but it retains more value over time. As for knowledge, who knows how best to retain this elusive artifact, valuable stuff that may only be imperfectly transmissible?

These distinctions would seem crucial to how academic information architects should be thinking about managing their resources. Those who disregard them are sadly reminiscent of people who wander onto the Web ignorant of the heuristics and intellectual traditions that librarians have developed over time. They, like all info-naïfs, are unaware of the pitfalls of keyword searches and Boolean statements, or the trickiness of cataloging, or the very slipperiness of information itself. U

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