necessary "framework of fundamentals to serve as a basis both for drafting and for interpreting copyright legislation."

Patterson and Lindberg's concern is for the "correct premises" or underlying principles of copyright, not with copyright rules emanating from litigation. Central to their case is the assertion that copyright is not a *"natural property right"* of the author by reason of creation but a *"statutory grant of a limited monopoly"* by reason of legislation. They feel that the 1976 Copyright Act clearly expresses the intent of Congress to establish copyright on the statutory-grant theory, but that copyright owners and the courts have continued to view copyright as a property right rather than a limited monopoly. A second principle of Patterson and Lindberg's position is that the copyright of a work is distinct and separate from the work itself, a principle underlying the critical distinction between competitors and consumers. Much of *The Nature of Copyright* explores the implications of these two basic principles for practical copyright problems, including the scope of the right to copy under *fair use*. It is through this analysis that a law of users' rights emerges, an idea that is highly unusual if not unique among legal scholars.

In general, Patterson and Lindberg advocate the interpretation of copyright in light of the Copyright Clause of the Constitution and existing copyright statutes, including the legislative intent of the 1976 Act. They contend that excessive reliance on case precedent often substitutes for analysis and reason, and that narrow rulings resulting from the adjudication of fact-bound controversies constitute a poor basis for applying the law in a changing social and technological context. Perhaps the most critical point made in this work for librarians is that copyright law deals, in essence, with the control of information and knowledge. In facing future challenges resulting from the development of technology, copyright law must be continually interpreted in the light of basic principles as embodied in the Copyright Clause.

The Nature of Copyright is highly recommended to librarians. Along with another excellent recent work, Kenneth Crews' 1990 UCLA dissertation *Copyright Policies at American Universities: Balancing Information Needs and Legal Limits*, it should be brought to the attention of legal counsel and academic administrators in our institutions.—*Joe A. Hewitt, University of North Carolina, Chapel Hill.*

Bolter, Jay David. *Writing Space: The Computer, Hypertext, and the History of Writing.* Hillsdale, N.J.: Lawrence Erlbaum Associates, 1991. 258p. $45 (ISBN 0-8058-0427-7); paper, $22.50 (0-8058-028-5); supplementary 3.5" Macintosh diskette, $8.95 (ISBN 1-56321-067-3). LC 90-46380.

Jay David Bolter is a classicist who has written extensively on the cultural implications of technology, notably in his 1984 work, *Turing's Man*. His new work pulls together research on the history of writing and printing, on contemporary literary theory, and on information theory to examine "the late age of print" and make some guesses about what will follow it.

As his title suggests, Bolter is primarily interested in the technology of writing, the way in which the tools, particularly the writing surface, influence the author and the reader. The papyrus roll forced the author and the reader to move in a linear fashion through the text as the scroll was unrolled. The paged book, or codex, allowed browsing and introduced the page as an aesthetic unit and as a unit of information. The printed book further refined the concept of the page as a unit and added such devices as tables of contents and indexes to enable nonlinear access to the text.

The marginal gloss in a codex or the note in a book interrupts the linear structure of the text, but remains subordinate to it. The reader turns to it briefly and then returns to following the plot or argument. Bolter contends that hypertext frees the text from this hierarchy and can blur the distinctions between author, text, and reader. A gloss may be subordinate to the main argument, or it may lead to other arguments that the reader follows in preference to the main argument. Since the electronic text is not confined to a specific printed format, the reader

may even choose to alter the argument or to pursue a whole new course that the author had not foreseen. Each subsequent reader may choose to follow the paths suggested by the original author, those added by other reader-authors, or may introduce new glosses or arguments arising from his or her unique reading of the text. Recent literary theory has emphasized the interactive nature of reading; the computer allows reading to become a truly collaborative act, to which the original author, the text itself, and the readers all contribute.

Bolter compares this new text to a network. As a text is read, the reader brings to it his or her own associations. With hypertext, these associations can become explicit, producing not a linear, hierarchical text but a network of associations. Throughout his book, Bolter makes it clear that these new concepts are influenced by the computer but not necessarily caused by it. He cites a number of literary antecedents, going back to *Tristram Shandy*, for the nonlinear text, and in several passages relates the abandonment of hierarchy to the debate about the cultural canon. When texts are infinitely mutable, it becomes meaningless to speak of a stable canon of standard texts. Bolter accepts that cultural unity is a thing of the past, but expects that computer texts and computer networks will allow likeminded people to come together and find some sense of communal purpose. Anyone who has looked at the incredible variety of Usenet groups knows this is already happening.

In his introduction, Bolter writes about his frustration with the straitjacket of linear argument. As I read *Writing Space*, I felt some frustration with his frustration. At times he seems to confuse linear argument with the single-minded hammering away of the debater. Evidence to the contrary is suppressed and occasionally its existence is even denied. Then, in summaries at the end of each section, the other possibilities suddenly appear. In fact, the book progresses not as one linear argument, but as a series of roughly equal arguments, and topics are often examined from several different

perspectives. But since this is not a hypertext but a printed book, its readers must have good memories and create their associations as they go.

A diskette containing a hypertext version of *Writing Space* is available as a supplement or alternative to the printed work. Words and topics that can lead to alternative pathways are marked, and it is certainly much easier for the reader to create associations. Indeed the copyright notice invites the reader to participate in the continuing creation of the electronic text. I got the diskette when I had already read about two thirds of the printed book, and I found the hypertext disappointing. Most of the hypertext associations were those that an attentive reader of the printed text would already have made, and the much briefer hypertext lacks the richness of ideas found in the printed version. Bolter despises the "antireader," the mindless consumer of text. The creative, interactive reader is his ideal. Such a reader should probably look first at the hypertext, using it as a guide to the complexities of the printed version, making choices about what to study, what to browse, and what to skip, and then going on to the fullness of the printed version. Finally, the creative reader may want to return to the hypertext and add new associations and paths.

As Bolter himself admits, there is still much to be done on the history of writing technology. This book is a sketch with many details left to be filled in later. Nor is Bolter an infallible guide. He is writing too early in the age of hypertext to speak with authority, and his biases sometimes limit him. Both problems come out in his discussion of literary hypertexts, which concentrates almost exclusively on one example and almost completely ignores the possibilities that hypertext offers for popular literature. The canon may be dead, but Bolter clearly still believes that literature meant to be read actively is "more equal" than literature meant to be consumed passively.

Bolter discusses multimedia and virtual reality briefly, but asserts that "the world of useful work is a world of reading and writing." He firmly rejects the

notion that we may be not only in the late age of print, but also in the late age of text. Unfortunately, his arguments for the continuing importance of text sound a lot like those of the supporters of the textual canon and do not take into account important changes in our society. Thanks to television, there are already many people for whom text is not a part of daily life. Computer imaging, voice recognition, virtual reality, and ease of access to them through networks seem likely to accelerate that trend. If you read *Writing Space* (and you should), abandon linear argument and read it as a source of ideas, a book that will pull out your associations with text and give you associations that you can use in your work and further reading. You'll get mad occasionally, you may reject some of the ideas, but there are so many ideas in here that some of them are bound to change the way you see your Post-It Notes, a page of this journal, and those lines scrolling past on your terminal.—*James Campbell, University of Virginia, Charlottesville.*

Scholarly Communication and Serial Prices: Proceedings of a Conference Sponsored by the Standing Conference of National and University Libraries and the British Library Research and Development Board, 11–13 June 1990. Ed. by Karen Brookfield. London: Bowker-Saur, 1991. 155p. acid-free, $45 (ISBN 0-86291-478-7).

As the subtitle indicates, this book consists of thirteen papers and summaries of subsequent discussions presented at a June 1990 conference in Great Britain. In the keynote address, Jack Meadows, chief librarian at Loughborough University, provides an overview of the groups involved in the production and use of serials as well as the factors to be considered in evaluating the current role of serials. His focus is entirely upon scientific, technical, and medical (STM) serials, and though some of the other authors do not mention this specifically, in fact the entire conference is concerned with the STM situation. Meadows does not point out all the motivations for scientists to publish papers, missing the

crucial one of creating a paper record of research for promotion and to support grant applications. Similarly, in the discussion of the STM community (labeled "authors and readers"), he does not address two important characteristics, the increasing size of the population of scientists performing and reporting research, and the tendency for much research to be reported in small articles rather than in extended ones, the so-called "salami slicing" of scientific reporting.

Margaret Boden of the University of Sussex outlines in "Appraisal of Research" the function of peer review and some related issues of current significance to the research community as well as to librarians. Once again, however, some important points are not mentioned. She does not cite the work of Stephen Cole on the sociology of peer review in the sciences and social sciences or his key notions of "core knowledge" and "research frontier knowledge"; she refers only obliquely to impact measurements based on citation studies and the import/export of references as developed by Eugene Garfield.

Duane Webster attended in his role as executive director of the Association of Research Libraries and presented two excellent papers. The first, "The Economics of Journal Publishing: The Librarian's View," provides, uniquely in this conference, the conceptual framework as well as the supporting statistics for the fiscal dilemma confronting libraries as STM journal costs continue to exceed both the general inflation rates of the publishing industry and the ability of research library budgets to support subscriptions in the breadth and depth once thought desirable. This paper also describes one ARL initiative for coping with the crisis, the foundation of the ARL Office of Scientific and Academic Publishing. Webster's other paper, "A Perspective on the Politics of Change from the United States," argues for substantial alterations in the modes of distributing scientific and scholarly information through the electronic telecommunication networks already present and in development. In essence, he states the