close to unreadable.

However, the most controversial contribution in the entire collection certainly is Jack Andersen's "Materiality of Works: The Bibliographic Record as Text." The author argues that bibliographic records are textual works and that, as such, they are subject to an interpretative process on behalf of their readers. Unfortunately, his tentative "deconstruction" of the "textual elements" (p. 51) at work in a bibliographic record falls short. His listing is both incomplete and full of truisms, such as "the words and concepts used in indexing and classifying a document may yield information toward its content or aboutness" (55). But what about the semantic value of the very ordering (syntax) of all these textual elements, the semiotic value of punctuation, the influence of display options, and so on? The trouble with this paper is not that it is uninteresting—it *is* interesting, but at the same time it frustrates and infuriates the reader, because it is but an awkward sketch of a wonderful paper still to be written. It states a fascinating topic without addressing it.

Smiraglia himself wrote both the introduction and the conclusion of this collection, assigning it a perfect cyclical form. Much of the material in both his papers further develops ideas he expounded in his recent book on the same topic.[2] Readers will benefit from reading both *publications* (i.e., of course, *works)* in connection.

One last (tiny) remark about Scott R. McEathron's paper "Cartographic Materials as Works": the correct spelling of the author of *Theatrum Orbis Terrarum* is Joan *Blaeu,* not *Bleau,* as he writes throughout his paper. That is the kind of small mistake that can definitely impede correct information retrieval.—*Patrick Le Boeuf (patrick. le-boeuf@bnf.fr), Bibliothèque nationale de France, Paris*

References

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2. Richard P. Smiraglia, The Nature of "A Work": Implications for the Organization of Knowledge (Lanham, Md.; London: Scarecrow, 2001).

Introduction to Technical Services for Library Technicians. By Mary Liu Kao. Binghamton, N.Y.: Haworth Information Pr., 2001. xii, 113p. $34.95 cloth (ISBN0-7890-1488-2); $22.95 paper (ISBN0-7890-1489-0).

There is a position that holds that library paraprofessionals should be moved toward greater standardization, greater professionalism, and (therefore) a certain amount of tertiary education. Under these assumptions, paraprofessionals (or library technicians) would seek an associate's degree or a one-year certificate focusing on the technical workings of a library. This work addresses the need for a textbook for an introductory course in the operations of a technical services department. Unfortunately, despite its intended goal of increasing the professionalism of paraprofessionals, this book is written at such an easy reading level as to imply that anyone with an eighth-grade education could work in a library. And frequent overgeneralizations render some of the information presented inaccurate or even wrong.

In most cases of inaccuracy, it would have been quite easy to have given a slightly more complete statement that would have been true. Referring to a call number as a unique number (39), to the binding of journals as a semi-annual task (72), and to the Library of Congress as the agency that would define indicators in Machine Readable Cataloging (MARC) (55) are inexcusable errors. In the former two examples, it is simply not true that all libraries do things in the way described. As for the latter example, it is simply not true at all (the ALCTS/LITA/RUSA MAchine-Readable Bibliographic Information Committee defines them). Sometimes an overgeneralization is restated elsewhere in the book, in a more complete and accurate way. And sometimes a mistake is perhaps too trivial to be of great importance to the novice paraprofessional. However, to rely on this book as a textbook would be to create an environment of having to fill in the gaps where the author has painted with too broad a stroke. A little misinformation can go a long way.

This has the beginnings of a nice introductory text, although, as mentioned, the reading level is shockingly low for something intended for those looking for employment in an information profession. A slim volume of short chapters (with numerous illustrations, an index, and a bibliography of suggested reading), it is an overview encompassing what "everyone" should know about technical services. Yet certain parts of it seemed to assume no prior knowledge of libraries—plentiful definitions at the beginning of every chapter—while other parts were not so well annotated (for example, "UTLAS" is mentioned but never defined nor described) (15, 22).

This is all very unfortunate, for the book is not without things to recommend it. It is sensibly organized into nine chapters, with a nice narrative flow that somewhat mirrors the flow of tasks through a typical technical services department. Chapters on acquisitions, cataloging, government documents, serials, and preservation are rounded out with introductory chapters on the role of computers and bibliographic utilities.

The chapter on computers and library automation is particularly introductory in its approach, and the book consistently sings the praises of automation and all of the positive changes it can bring to libraries. However, I noticed that it seemed that all of the screen-shots used as illustrations were taken from the same library management system, which made me wonder if that happened

to be the system used by the author's employer—until I noticed that the author works not for a library, but for the company that sells the very system used as an example. Is this product placement or simple convenience? And is the theme of automation a soft sell or just the author's honest opinion based on personal experiences?

The book has an imprint of 2001, and some of the information (e.g., on government documents, on electronic journals) has changed even in the short time since the book was published. Some updating would be necessary in these areas were the book to be used in the classroom.

As the book itself says, again over generalizing, "out-of-date materials should be discarded in order not to mislead readers with the wrong information" (31).—*Rice Majors (ram2@cornell.edu), Lewis and Clark College, Portland, Oregon*

Issues for Libraries and Information Science in the Internet Age. By Bruce A. Shuman. Englewood, Colo.: Libraries Unlimited, 2001. 228p. $48 paper (ISBN 1-56308-805-3).

Bruce Shuman is a fan of the Internet. In fact, after consulting the *Oxford English Dictionary*, you might even say he is a "keen and regular spectator" of the medium. But, unlike more casual fans, he is not blind to the deficiencies marring the object of his fascination. In the preface of *Issues for Libraries and Information Science in the Internet Age,* Shuman calls into question the idea of the Internet being "an unalloyed boon to mankind, a totally positive force, without downside" (xvi). While pursuing his investigation into the nature of the Internet, as well as what's available to librarians through the medium, Shuman provides perspective on the history, benefits, and pitfalls of the medium, as well as a few examples of the inherent perils of writing about a fast-moving technology.

Especially useful is a narrative timeline of the Internet. Shuman begins the history with Denis Diderot's *Encyclopédie* effort of the 1700s. He then connects the dots from Vanevar Bush's essay on a "Memex" machine, which was an idea for a machine to process all of humanities information, to universities' experiments with the ARPANET, and then to the modern Internet. More problematic is a selection of Web sites that have been provided as examples of the "cream of the crop" (145) for librarians. The difficulty with the list is that the Internet changes very quickly, and subsequently many of these sites either no longer exist or have changed their entire business model. One example is the company Alexa, which a couple of years ago provided a Web site recommendation tool, but which was subsequently purchased by Amazon.com. The Alexa product was a fascinating Web browser add-on that allowed the Internet surfer to provide feedback on visited Web sites and then in turn see the feedback left by other users. However, when readers visit the link provided in the book, they will find a search-box front end to Amazon.com's e-commerce enterprise. This is merely one example of the mutability of the Internet and, to be fair, Shuman prepares the reader early on with a disclaimer in the preface. An alternate solution to this problem, currently being offered by the authors of many Internet technology books, is to provide a companion Web site that can then be updated as Web sites change.

The book also discusses the potential pitfalls and shortcomings of the Internet. Here Shuman touches on many of the issues that concern librarians, including copyright, electronic security, privacy, and identity theft. With the Recording Industry Association of America (RIAA) now suing individuals for copyright violations because of peer-to-peer music sharing, the current legal atmosphere is uncertain for many users. Shuman rightly calls for "clear and unambiguous laws and policies that will acquaint users . . . [with] (1) those things they are permitted to do with impunity and (2) those things that are prohibited, and for which they could incur a punishment or fine" (119). Unfortunately, other arguments being made are not as clear and serve to undermine the author's intentions. For example, hackers are inadequately identified as "people whose computer skills and resourcefulness greatly outweigh their ethics" (128). According to the New Hacker's Dictionary Web site, a preferred definition is "one who programs enthusiastically."[1] Hacking can have a negative connotation, but that's not necessary. There are many systems librarians who spend long hours "hacking" together, improving access to periodical databases and library Web sites through the use of scripting languages and other programs. These are the hackers of our profession, and it's important not to confuse them with malicious programmers. Additionally, as a solution to the distributed denial of service attacks (a problem connected to viruses that can bring commercial Web sites to their knees), the author appears to be advocating a global per-page access fee for Web surfers (123). This idea would have profoundly negative effects on Internet commerce, not to mention the ongoing indexing and archiving of the Web being done by search engines and other groups.

The real strength of Shuman's book on the Internet comes in its discussion of counteracting the negative affects of Luddites. The term was coined to describe the followers of Ned Ludd of the early nineteenth century who were "so resistant to modern technology that they committed willful sabotage to its machinery to retard its progress" (40). The Internet is currently solidifying its presence as a fact of life, especially for librarians. To be effective, reference librarians must now be able to turn to Web site resources as efficiently as they would refer to works behind the desk or in the reference stacks. These days