

environment, especially with faceted classifications like UDC (and, increasingly, DDC) with each aspect of the topic represented by a particular part of the number.

- UDC and DDC are moving closer together so that in the future a library might consider using UDC for specialized parts of its collection and DDC for the rest. This link is especially interesting for North American librarians unfamiliar with UDC.
- Classification is an international tool, especially as we use it increasingly in our catalogs and other sites on the Web.
- Automation makes updating classification numbers easier, especially when they are used for “virtual” rather than shelf browsing. Reclassification may be a cost-effective project, even for shelving, if it means significantly improved access.
- Shelving and browsing make different demands on classification, and we can use them differently for these two purposes.
- Advances in automatic classification are an aid to catalogers in terms of workload—an especially welcome capability for classifying large numbers of electronic resources.

Throughout the ten chapters, themes occur in different contexts, weaving elegant squares for a well-designed quilt. The connections are not always conspicuous, but one comes away from *The Future of Classification* with a far deeper and more cohesive understanding of classification and its potential than one might expect of ten varied chapters from ten quite different authors.

Editors Marcella and Maltby encourage us to take this book seriously. They suggest that librarians need to regard classifications as part of their total system for information retrieval.

The weaknesses of one aspect of the system can be balanced by the strengths of another part; however, this balance can only be achieved if librarians have a close understanding of each aspect. Classification is an area that we do not always stress in North America, yet it is a potent means of achieving our overall end: linking people and information.—*Hope A. Olson* (*hope.olson@ualberta.ca*), *School of Library & Information Studies, University of Alberta, Edmonton, Canada*

Gatekeepers of Knowledge: Journal Editors in the Sciences and the Social Sciences. By Stephen McGinty. Westport, Conn.: Bergin & Garvey, 1999. 160p. \$55 (ISBN 0-89789-664-5). LC99-12703.

Journal publishing is receiving a great deal of attention, primarily because of the costs of journal subscriptions. Stephen McGinty addresses another element of the publishing process: editing. Specifically, he reports on the results of interviews with journal editors in the sciences and the social sciences. In part, his aim is to study the personal aspects of editing, such as how one becomes a journal editor, how the editors go about the business of editing, how the individual editors perceive their role in the scholarly community, and how they manage their workload. In addition to these personal details, he asks editors their perceptions about technology and journal publishing and the extent to which disciplinary cultures affect their work and their journals.

Despite the capabilities of technology, especially the Internet, to facilitate rapid transfer of information, many agree that there is still a need for some control over the dissemination of disciplinary information and that the role of the editor is likely to endure, regardless of the medium employed for publication. This topic is an important one, and this book is clear and

well written. These strengths, however, are not sufficient to overcome some serious deficiencies.

McGinty reports that he interviewed thirty-five editors. He does not, however, tell the reader why he chose this number, or more importantly, why he selected these thirty-five individuals. Was this simply a convenient number, or were these the individuals who agreed to speak with him? The editors come from disciplines in the sciences and social sciences, but McGinty does not reveal which particular disciplines are included, except that fifteen are from the sciences and twenty are from the social sciences. With quotations from individual editors, McGinty mentions the discipline in which the editors work, but there is no simple table or narrative that shows the specific disciplines represented. There is no way to tell, and McGinty rightly does not present these editors' experiences and thoughts as representative of editors in general. He does attempt to place the editors' experiences into some conceptual frameworks, notably the gatekeeper model suggested by Kurt Lewin several decades ago. The model is sometimes imposed, though, and its application is repeated unnecessarily. Even with the attempts at applying conceptual frameworks, there is a sparse review of the considerable literature on editing; the bibliography is scant and not very helpful.

There are other shortcomings in this work. In the chapter on the impact of scholarly culture on editors and editing, McGinty writes of differences between editors in the sciences and the social sciences. For example, editors in the sciences are likely to have larger full-time staffs and larger budgets. He implies that the differences may be due to the different cultures of the sciences and the social sciences. He does not, however, address some other important differences between these cultures that may affect editorial operations. He does not examine frequency

of publication. It may be that journals in the sciences are published more frequently than those in the social sciences. He does not examine the numbers of submissions received by the editors. These factors may influence the sizes of editorial staffs. If a science journal is published weekly and receives a thousand submissions a year, that journal will require a larger staff and budget than a social science journal published quarterly with one hundred submissions per year.

These shortcomings, while serious, are not the most important. McGinty includes many quotations from his interviews with the editors. At times the editors' words are illuminating and provide insight into the workings of the journals. At other times, the statements are repetitive and intrusive. Many opinions and experiences could have been summarized so that the reader could better understand the challenges faced by the editors. Without the numerous quotations this book would have been even shorter—this is the most troubling aspect of all. McGinty's examination of journal editing could have been an interesting and informative article, but it has been unnecessarily expanded to justify publication as a high-priced book.—*John M. Budd (buddj@missouri.edu), School of Information Science and Learning Technologies, University of Missouri-Columbia*

Knowledge Discovery in Bibliographic Databases. Ed. Jian Qin and M. Jay Norton. *Library Trends* 48, no. 1 (Summer 1999). Champaign: University of Illinois at Urbana-Champaign, Graduate School of Library and Information Science, 1999. 281p. single copy, \$18.50 (ISSN 0024-2594).

Knowledge discovery in databases (KDD) is one of those arcane information science topics that seem both mysterious and inviting to most librarians, bearing an aura of the future of librarianship. While being discussed in

the major information science journals (e.g., Trybula 1997; Vickery 1997; Raghavan et al. 1998), it has not found its way into mainstream library science literature. If for no other reason than the appearance of this issue of *Library Trends* is a welcome development, especially because of its focus on using KDD in bibliographic databases.

The papers comprising this book have been artfully assembled. The introduction and a useful overview of KDD are followed by an assessment of classification schemes, from the standpoint of knowledge discovery, as devices of knowledge representation. This link to bibliographic organizational practice yields in turn to two accounts of finding new knowledge by discovering connections, through common citations, between sets of articles in the biomedical and philosophical literatures. Next is a demonstration of using cocitation links to forge a pathway of relationships through the literatures of several subject areas from economics to astrophysics. There follow three articles on different aspects of discovering knowledge in word-occurrence patterns, another four on automated knowledge discovery using various kinds of document surrogates (search-engine templates, metadata headers, abstracts, MARC-encoded geospatial data), and a concluding essay on the significance of automated information retrieval for librarians. Each article takes on a distinct subtopic, complementing its neighbors and contributing to a largely satisfying whole.

At the same time, the collection suffers somewhat from not sufficiently tailoring its presentation to its primary audience. The authors are all well versed in the information science concepts underlying KDD, but unfortunately most working librarians lack such familiarity. Each article seems intended to introduce a particular aspect of KDD to the nonspecialist; only a few report new research. It is therefore doubly frustrating when bibliometric

jargon and obscure statistical formulas are employed without explanation, as they frequently are in this volume. Such explanation would of course slow down a presentation and annoy information scientists, but by writing as if for *JASIS (Journal of the American Society for Information Science)*, most of the authors have squandered an excellent chance to educate the working librarian and drive home the relevance of their topics.

A recurring theme in this volume is KDD's function of revealing the broader intellectual context of a scholarly work by using computer-aided association techniques to uncover links between two apparently unrelated articles. This process can have dramatic results. For instance, Don Swanson and Neil Smalheiser present a classic example of bibliographic KDD: linking articles through common citations to produce a promising but unsuspected idea for treating migraine headaches. In the following chapter, Kenneth Cory recounts how humanities researchers adapted Swanson and Smalheiser's methods and discovered an undocumented intellectual link between Robert Frost and the Greek philosopher Carneades. Henry Small's 331-article path from economics to physics is a spectacular demonstration of both the power of bibliographic association and the interrelatedness of knowledge. Jian Qin's study of using bibliographic coupling (through common citations) to discover semantic patterns in the literature shows how frequency distributions of keywords can delineate "core" and "marginal" literatures in any subject, and identify interdisciplinary regions; Qin shows how analyzing the co-occurrence of words and phrases in various documents can also perform these functions.

Bibliographic KDD by its very nature depends on probabilistic techniques of text processing. It rests on the assumption that the frequency of certain words or the citation of certain documents provides a reliable clue to