

a consideration of "information" as a determinant of business success to "information technology," and much of the book is concerned not with the internal and external sources of information and how information may be organized for effective use, but with systems design and development for IT systems in organizations. Some attention is given to the use of information, but this chapter is very restricted in scope and is concerned almost entirely with the manipulation of numeric data and techniques for presentation. There are no case studies of how managers *actually* use information or of the problems an organization may face because of failure to gain access to external information.

Knight and Silk's first chapter is also very unsatisfactory—it offers a very simplistic view of the emergence of the "information society," using data that make clear that the concept appears to stand or fall on the idea that employment in service industries is the same as employment in "information industries." The case becomes even more suspect when we see that financial services have been the only area of major growth in the UK service sector since 1976.

Bawden and Blakeman are much sounder on virtually every aspect of information technology. Their book is firmly based on the research literature, and a manager would find better guidance on IT applications to *information services*, although the business perspective of Knight and Silk is largely missing. The authors are more concerned with how information scientists/information managers can make an impact on their organizations than with how the manager can derive benefits from their efforts.

In summary, both these books are worth reading; they are addressed to different audiences, but each audience could benefit from reading the other. Both will go on my information management reading list, but with different recommendations. Bawden and Blakeman will be recommended for its scope and thorough treatment of a number of significant issues for the information manager, Knight and Silk for its business orientation. Some day, someone is going to bring these areas together.

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Concepts in Information Retrieval. M. PAO. Libraries Unlimited, Littleton, CO. (1989). 300 pp., \$28.50, ISBN 0-87287-405-2.

In *Concepts in Information Retrieval*, Miranda Lee Pao presents a solid text for an introductory course in document-based information retrieval with an informatics flavor. Pao organizes the work around her experiences in teaching a course on the subject, which had originally been conceived by Tefko Saracevic at Case Western Reserve University. Yet as I found, the book can also serve as an excellent source of supplemental articles for other introductory courses in library and information science.

The initial section begins with a cursory cover of information theory, but proceeds to well conceived analyses of bibliometrics, user studies, and the concept of relevance. Part two follows a systems approach to look at mathematical models in selection, plus indexing and thesauri, the nature of automated files, the reference process, and document delivery. The next section deals with evaluation and measurement, and the text closes with some pondering of the coming effects of artificial intelligence.

Although I highly recommend this work, let me share a couple of qualms. Most complaints have to do with its organization and stem from its origins in a specific course within a specific curriculum. The physical separation of sections on bibliometrics and relevance from the evaluation and measurement portion, for example, is not helpful. Indeed, I would hope for a clearer articulation of the structure and transitions among various sections—these would no doubt be evident in the classroom, but are not so clear in writing. The writing itself is sometimes awkward and full of unnecessary passives. One could also quibble with details, such as the failure to include random access files in a section on file organization that extends to mentions of far less common self-optimized and cluster files. Let me wish too for the slick and heavily graphic textbook presentations in computer science or management information; unfortunately, the economies may not be there for library and information science. In the final analysis, however, this is a notable work of interest to anyone teaching in our field.

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