A complaint might be registered: the author makes heavy use of personification and analogy. These detract from the substance when they abort the precision of definition that need be achieved in seriously proffering potentially controversial fundamental principles.

University of Alabama in Birmingham KEVIN D. REILLY

Annual Review of Information Science and Technology, Vol. 12. MARTHA E. WILLIAMS (Editor). Knowledge Industry Publications, Inc., White Plains, New York 1977. 361 pp. $35.00

The volume contains nine reviews; the topics were selected to reflect the master plan for the series. Five of the chapters introduce new topics: Bibliometrics, Numeric Data Bases and Systems, European Information Networks, History and Foundations of Information Science, and Privacy. This assessment is divided into two sections, comments on the volume as a whole followed by a summary of each chapter.

The major shortcoming of this volume is that it suffers from a lack of continuity. New topics are, for the most part, clearly identified, and two sets of authors, Park, and Liston and Howder, take great care to position their reviews with regard to previous volumes. Most of the remaining chapters however, are not linked to their predecessor(s) making it difficult for the novice user to obtain a longitudinal view of these topics. Nonetheless, ARIST represents an important reference source which continues to deserve a place in personal and institutional information science collections.

In the chapter "Evaluation and Design of Bibliographic Data Bases," Stern reviews literature appearing since the end of 1975. The chapter emphasizes evaluation aspects from a European perspective and a large number of the references are to European literature. In terms of overall quality, this chapter is one of the weakest in the volume. For example, the most recent ARIST chapter on the subject (Volume 11) is cited; however, none of the preceedings reviews are explicitly referenced in the text. Further, the section on bibliometrics duplicates material covered in Chapter 2 of this volume and is not adequately tied to evaluation. Finally, the author selects a set of articles "for the value of their experimental designs" which are then discussed only in terms of their findings.

Narin and Moll's chapter on "Bibliometrics" combines a tutorial on bibliometric techniques with a review of the literature. The authors' decision to limit their coverage to "readily available material in the open literature" excluded Parker's 1967 study of the behavioral sciences which was only published as a technical report (PB 177 073). Otherwise, the authors succeeded in representing the major authors who have published in this field and their chapter provides a sound introduction to the methodology and application of this important theoretical area.

Three main concerns are addressed by Park's chapter on "Bibliographic and Information Processing Standards"; they include universal bibliographic control, standards of machine readable records for interchange among abstracting and indexing services, and the standardization of individual data elements. The review attempts "to report national and international standards (official and *de facto*) which have been developed during the past two years" and to describe current activities which have been reported in published or widely available unpublished literature. The author notes that a "comprehensive framework for standards development appears to be lacking".

Liston and Howder's chapter on "Subject Analysis" reviews literature published primarily during 1976 which is related to the process of subject analysis, indexing and vocabulary management. They conclude that future research will be enhanced by integrating "the applicable knowledge being generated in a wide variety of disciplines". What distinguishes this review from its predecessors is the framework that the authors have developed to provide an overview for their review. Articles are assigned to cells in a matrix where rows represent processes such as "Indexing Methodologies" and columns represent aspects of the processes such as "Mechanization". As a result, the most popular topics based on publication volume are easily identified. Finally, the authors use the matrix to develop a subject index to their bibliography, thereby facilitating access to the references independent of reading the entire chapter. This chapter is enhanced by the additional analysis which might well serve as a model for future reviews.

The chapter on "Numeric Data Bases and Systems" by Luedke, Kovacs and Fried provides a good introduction to a topic which is gaining importance. The review begins with a discussion of the characteristics and uses of numeric data. Next, the authors survey existing data bases by subject and review and literature related to both costs and obstacles to use. An extensive list of acronyms is included.

Bunch and Alsber's chapter is primarily a tutorial addressing four main aspects of "Computer Communication Networks": network configurations, performance issues, common carrier communication utilities and packet switching. All four issues should interest both designers and users of network services. Unfortunately, there is substantial overlap in general subject coverage and the age of the literature covered by this chapter and its immediate predecessor in Volume 10 which these authors neither acknowledge in the text nor cite.

Tomberg describes "European Information Networks" which are either operating or planning to operate, including United States services with a "European presence." The author surveys the state of the art and then asseses the future prospects for these systems in view of some strictly European problems, concluding that "future developments are very much in the hands of the post offices".

Shera and Cleveland's highly readable assessment of the "History and Foundations of Information Science" first reconstructs the history of the field from the birth of documentation as a separate field once described as "Librarianship performed by amateurs" to the present. Next, the authors review two sets of papers that discuss first the theoretical foundations of information science, and second, seek to define information and information science. In summary, their assessment finds information science to be lacking strong foundations. "There is a preponderance of philosphical rhetoric making it appear that we are trying to talk our way into acceptance as a scientific discipline". This chapter is especially recommended for students and other newcomers to the field of information science.

Privacy of an individual's records is an issue of concern to all readers of ARIST, as information system designers and as private citizens. Carlson begins his chapter on "Privacy" by summarizing legislative developments to date. He next discusses areas of application in the context of the Code of Fair Information Practice as it relates to information services, employee records and the files of external organizations. Carlson accurately states that his review reflects that "in 1977, there are more questions than there are answers on the matter of an individual's privacy and its socially acceptable protection from misuse by record deeping systems".

University of California, Los Angeles MARY J. CULNAN