

the lack of explicit commentary on the weeding process. Weeding is implied in most of the essays, yet seems still to be only an assumed process. Withal, the format provides handy idea generators for collection managers.—James E. Weaver, *Whatcom County Public Library, Bellingham, Washington*.

2nd International Online Information Meeting, London, 5-7 December 1978. Organized by Online Review, the International Journal of Online and Teletext Information Systems. Oxford, New York: Learned Information, 1979. 286p. \$35. ISBN 0-904933-15-6. (Available from: K. G. Saur Publishing Inc., 175 Fifth Ave., New York, NY 10010.)

This volume contains thirty papers presented at the second international meeting on this topic organized by the journal *Online Review*, which is noted for its well-refereed articles in the field. However, in reviewing this volume this reviewer finds both good news and bad news for the prospective purchaser. First, the good news.

The papers are consecutively numbered and further keyed by a letter prefix to apparently form ten broad subject groupings, although no headings really define these divisions in the table of contents.

Group A leads off with an excellent paper by Neal Gregory called "The U.S. Congress—On-Line Users as Policy Makers," which is followed by a paper dealing with language uses and ambiguities in retrieval systems that is cleverly written but unfortunately tells the reader nothing really new.

Group B deals with user education with several well-known authors describing their experiences in training users in very creditable fashion.

Group C contains one of the more creative and interesting papers by D. D. Singer and others, titled "The Role of a Minicomputer in an Information Department to Provide Online In-House Services."

Group D offers three papers dealing with information costs, international data transmission tariffs, and pricing of on-line services by means other than the connect time and royalty basis.

Group E contains one paper on the mar-

keting strategies used in Spain for their "Red INCA" information retrieval system, which interestingly employs remotely connected television monitors to connect users with searchers at the various "Red INCA" search centers.

The remaining papers address a variety of topics, e.g., the U.S. Bureau of Labor Statistics Time Series Data System; manufacturing industries' information needs in the United Kingdom; the Aslib Online Information Service; the experiences of a large industrial conglomerate in Finland with on-line search services from Europe and the United States; the searching of chemical structure data files; the searching of chemical substances; Viewdata and Electronic Publishing; the OCLC system; press information banks; the NASA information system; automated subject switching in distributed networks; and data transmission speed impact on time structure and cost of on-line searching.

Fifteen of the authors are from the United Kingdom, seven from the United States, two each from West Germany and France, and one each from the Netherlands, Spain, Finland, and Luxembourg. All papers are in English, and they use many British spelling forms. Most of the papers are well written and organized, with consistent format used throughout, aided by uniform typeset titles and author bylines. The text of each paper is the typed original so that fonts vary between the papers with a few done on right-hand-justification text-processing systems. Thus the good news from an information viewpoint is that this volume contains a large quantity of better than average quality papers of interest worldwide.

But now the bad news. Copy editing of this volume is really shoddy, particularly in several of the papers, giving a very uneven view not only of author's care in final manuscript preparation but also a poor impression of the publisher's copy-editing policies for publications of this type. On page 258 even one hand-penned correction is to be found. Moreover, authors have occasionally coined new, nonexistent words, such as "parallely" on page 124. And one of the papers by a French author carries very interesting French-language words occasion-

ally intervening in the middle of an English sentence. Some good copy editing is not too much to ask when the price of this volume is this steep for a paperback volume sans index. Libraries would be advised to bind this if more than a few uses are expected.

This reviewer recommends purchase for library or institutional collections, but not by individuals for personal use since most individuals are likely to find only a few papers to their interest for archival purposes. Interlibrary loan will be a justifiable way for individuals to examine this volume if their libraries would not have multiple-use demand for it.—Audrey N. Grosch, University of Minnesota, Minneapolis—St. Paul.

Garfield, Eugene. *Citation Indexing—Its Theory and Application in Science, Technology, and Humanities*. Information Science Series. New York: Wiley, 1979. 274p. \$15.95. LC 78-9713. ISBN 0-471-02559-3.

A clear, concise, well-organized introduction to citation indexing and its applications has long been needed. This book fills that need admirably. Its author is Eugene Garfield, the founder and president of the institute for Scientific Information (ISI), publisher of *Current Contents*, *Science Citation Index*, *Social Science Citation Index*, *Arts and Humanities Index*, and *Journal Citation Reports*. The work describes the nature and history of the development of citation indexing, the design and production of a citation index, and applications of citation indexing for bibliographic searching as well as for use as a research tool for the understanding of science, scientists, and scientific journals.

The author's enthusiasm for citation indexing leads him occasionally to overstate his case: "If an index is looked at as an attempt to represent as much detail of the real world as possible, a citation index would be to a conventional subject index what a full-color photograph would be to a black-and-white drawing" (page 9).

But this is not much of an exaggeration. Garfield carefully shows the advantages of the citation index over conventional subject indexes for indexing and for bibliographic searching; these include the lack of need for intellectual analysis in citation indexing, the

objectivity of citation indexing, the increase in potential productivity and efficiency in searching, the avoidance of semantic problems and the need for vocabulary standardization in citation indexes, the lack of need—at least at the indexing stage—to worry about the variety of human languages in which papers are published, the precision of the citation index over time, and the ability of the citation index to identify relevant papers across disciplines. To this list could be added the fact that citation indexing measures *quality*, if only very crudely, while traditional subject indexes do not. These are mighty advantages, leading this reader to become aware of his underuse of citation indexes for his personal literature searching needs.

Garfield thoroughly addresses the limitations of citation indexing as well. Among these limitations are the problem of self-citation, the negative citation, the overciting of methodological papers, and the fact that citation indexing cannot identify significant work that has not been recognized as significant by the scientific community nor take into account the relative prestige of journals.

Just as ISI's tools provide an interdisciplinary approach to indexing and retrieval, so does this work present a multifaceted view of the applications of citation indexing. Garfield demonstrates not only its value as a bibliographic search tool but also its application to the patent literature and its use as a tool for the study and management of science, for analyzing the structure of science, for measuring the utility of journals and relationships between journals and fields, and for measuring the performance of scientists. Detailed discussions of methodologies and results for these applications are presented in separate chapters, each with an extensive bibliography.

This review would not be complete without discussion of the indexes to the volume. There is not only a detailed subject index but also a cited-author index. References to the work of Eugene Garfield were omitted from the latter, but a quick check of a sample of chapter bibliographies reveals that approximately 30 percent of all chapter citations are in fact self-citations. This is as it should be. Eugene Garfield has written far