

books), cumulating publications (research reviews and handbooks, essay collections, textbooks, histories, encyclopedias, and dictionaries). Part III, "Literature Retrieval and the System of Bibliographical Records," defines comprehensive recurrent bibliographies, selective recurrent bibliographies, retrospective bibliographies, guides to the literature and directories of periodicals, and concludes with a summary of the organization of scholarly bibliography. Part IV, "Recapitulation and Some Conclusions," emphasizes the essential uses of literature and bibliography, once their nature is comprehended, in efficient and intelligent literature searching. Appendices B-K (Appendix A, "Selected Books on the Organization and Operations of Science," follows Part I) are inserted amongst the chapters of Parts II and III and are cogently annotated selective lists of the types of literature and bibliographies described in the narrative text. Within most of the appendices, there is a grouping by the basic disciplines of anthropology, economics, geography, history, political science, psychology and sociology, with education added as a substantive field drawing on all the others. There is ready access to the material on the individual fields through the analytical index.

The intent is not on an exhaustive introduction to the reference and literature sources for the social sciences (the author refers you to Hoselitz's *A Reader's Guide to the Social Sciences* and White's *Sources of Information in the Social Sciences* as general comprehensive bibliographic guides) but to so describe the materials the researcher, student or professional, must use that an understanding of their nature leads to optimum return. For the student of the social sciences, then, this is the illuminating adjunct to the handbooks and guides, and it is equally beneficial to students in other disciplines for the pattern of their literature and bibliographies will relate.

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BETTY ROSENBERG

Understanding Scientific Literatures: A Bibliometric Approach. JOSEPH C. DONOHUE. MIT Press, Cambridge, Mass., 1973. 101 pp. \$10.00. ISBN 0-262-04049-5.

A FURTHER subtitle might be "its application to library selection policies," the bibliometric theory and derived analytical methodology, presented in sometimes daunting complexity, never losing direction toward this purpose. The presentation is logically ordered, each step of the argument numbered in classed sequence which allows ready correlation with the many tables and figures (e.g. 3.1 The Main Literature, Table 3.1 M Corpus Articles) and the concluding application in each case to library practices is explicit.

Why is this elaborate statistical analysis necessary? The author considers the problem of access to, use and bibliographical control of scientific journals to be an urgent matter for both scientists and librarians. Three categories are to be considered: the nature of scientific literature, librarians' servicing/control of this literature, and the indexing and automated retrieval of the literature. A primary need derives from the now long obvious overwhelming supply of scientific publication, which needs no further comment. Subsidiary are the factors of time—the quick obsolescence of much publication; of permanence—the few statements emerging as classic; and of vehicle—there being no certain journal in which the appearance of information/research may be surely anticipated. (Although on this last point the author demonstrates that a certain few journals can be shown to carry the bulk of important material in a specific field.) The basic library problem is the impossibility for any library being complete, or even comprehensive, in its holdings of this overwhelming supply of scientific literature. (The the individual scientist is even aware of many of these journals or scans those he knows raises another spectre.) Cost of the materials and housing space are determinants of the methods librarians have devised to evade drowning: ILL and regional, national and international storage lending libraries; reprographic copying in lieu of supporting individual journal files; cooperative acquisition in specialized fields for sharing single copies, comprehensive union lists. Exhaustive indexing and data stores for computerized retrieval combined with sophisticated SDI are devised to ensure economic directness in service demand. (That this does not ensure Elysium without end is a critical caution.)

How then is the librarian to decide which materials are essential to make the best of this imperfect situation? By applying bibliometry: the "quantitative treatment of the properties of recorded discourse and behaviour appertaining to it." (The definition is Robert Fairthorne's.) Mr. Donohue critically describes four techniques of quantitative survey: the Bradford (S. C. Bradford) distribution provides for identification in ranked sequence of the journals of importance for a field; citation tracing and the research front (Derek J. De Solla Price) hypothesizes that over a period of years (ca 10) the "really important papers" which form the research front can be determined by the pattern in a citation index; bibliographic coupling (William Goffman) reduces the broad research front for any subject to smaller units by relating structural characteristics of publications; the epidemic theory (William Goffman and V. A. Newill) projects a curve for the literature growth in a field, the infective spread of ideas, which reaches a peak—may become too large a literature for efficient communication of ideas—and tapers off. The author's description is admirably concise. He then applies each technique to the analysis of the literature of information science (as a sample) with detailed statistics and graphs as well as a simple (relatively) summation in plain terms.

By applying one or all of these techniques, the librarian might derive a basic list of journals possessing the optimum quantity of important articles in any field and evaluate the continued utility of the literature in each journal. Essential

background would derive from an understanding of the nature of the publications themselves and the characteristics of dispersion of new ideas in the literature. The author emphasizes that the major use of these techniques has been to study the literature itself for an understanding of the nature of science and its publications.

Can, or would, many librarians apply these techniques in individual libraries? Would a standard pattern derived from grant supported research in a prototype library (the author notes a project at the Allen Memorial Medical Library, Cleveland, Ohio) be adaptable to other libraries? These questions lead only to conjecture without pilot studies.

This elaborate apparatus depends for its basic data on those highly suspect library use statistics (borrowing and in-house use). The final chapter outlines the step-by-step procedure for applying this bibliometric method to libraries, the first step being based on use statistics. Bibliometry, as the author recurrently emphasizes, deals with quantitative factors not the qualitative substance of the information in the materials. Use statistics, unless exceptionally sophisticated, are only erratically indicative of the utility of the use. The author cautions that the librarian must understand the character of the scientist and his research methodology as well as the nature of the subject literature. That the scientist may reject as overwhelming the productivity of automated data retrieval and SDI services is a fact of life. That by the time of its appearance in publication an idea may be too late for effective use is suggested by a currently in preparation directory of expertise to conjoin ideas from the source brains. These points are raised not to invalidate Mr. Donohue's presentation but to suggest that the procedures might be overly elaborate for the ultimate benefit. A further hesitancy derives from a jaundiced acquaintance with the idiosyncrasies of library users and of librarians in determining selection policy: neither is notable for dispassionate rationality.

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Advances in Librarianship, Vol. 4. MELVIN J. VOIGT (Editor). Academic Press, New York (1974). 246 pp. \$15.00. LC # 79-88675.

VOLUME four continues the fine series of review articles Mr. Voigt began editing four years ago. As usual the articles are well written and documented. Each article is worthwhile reading and Mr. Voigt is to be commended for his selection of authors and his editing. The type face makes the text more pleasant to read. All in all it is a worthy companion for the preceding volumes.

This year's review contains the following articles: "MARC and Its Application to Library Automation" by Roy Torkington; "Selective Dissemination of Information" by Georg Hauerhoff; "Circulation Automation" by Hugh Atkinson; "Social Responsibility and Libraries" by Arthur Curly; "Women in Librarianship" by Anita Schiller; "The Use of Resources in Learning Experience" by Johnnie Givens; and "Reading as Information Processing" by John Geyer and Paul Kolens.

Although Ms. Schiller did not comment on authorship problems for women librarians one cannot help noting that only 13 of the 42 authors in this series are women. It is important to note the series seems to be drifting toward an automation/information science bias. Three of the seven articles in this year's volume deal with automation and/or information science. Ten of 38 articles in the series have been concerned with the same subject area. No other broad subject area has been given comparable treatment. If the series is to be a true annual review of librarianship a better balance in subject treatment must be achieved.

At \$15 a copy this book will probably not go into too many personal collections. The series could be of more value and reach more persons if the sale price could be reduced and the subject treatment made more equitable.

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G. EDWARD EVANS

The Subject Approach to Information (2nd Edition). A. C. FOSKETT. Linnet Books, Hamden, Conn. (1972). ISBN 0-208-01078-5.

MANY second editions are so slightly revised a reader must search carefully to find any of the changes. Mr. Foskett is not guilty of such a practice. Although the first edition received great praise the author has found ways to improve the book. The additions and revisions have made the second edition an outstanding book of great value to both practitioners and teachers.