which Professor Buck set for the Harvard library: adequate financing, a capable staff, well-selected and accessible collections, responsiveness to the needs of users, and an informed constituency. In working effectively toward these goals and in helping those both inside and outside the library to understand them Professor Buck has served Harvard well and has earned the respect of all academic librarians—*Andrew J. Eaton, Washington University.*

Technical Libraries: Users and Their Demands. By Margaret Slater. Aslib, 1964. 126p. 26*s*.

This report gives the chief results of a pilot study on the use made of a selected number of technical libraries located in Greater London during 1962 and 1963. The study was carried out by the Aslib research department of which Miss Slater is a staff member. Since a subsequent larger-scale study is to be undertaken the author cautions the reader that this is an interim report and that the findings are preliminary.

The three prime aims of this study are:

1. "to discover what items of information or documents customers seek, why they seek them and how they obtain them."
2. "to test a hypothesis; that it is possible to classify customers into user groups possessing recognisable common features and characteristic behaviour patterns, and to classify group needs."
3. "to measure the demand on librarians and libraries, in terms of expenditure of their time and skill, and use of stock made by different user groups."

Responses were obtained from the users of libraries of thirteen industrial firms (212 users), six academic institutions (223 users), four learned societies (79 users), and two government laboratories (75 users). Broad subject coverage was achieved as practically all types of scientific and technical backgrounds were represented in the 583 persons contributing directly to the study. The questionnaire sought to determine: (1) background information about the respondent; (2) information about the particular demand on the library service described in the questionnaire (purpose, relationship to user's normal work, degree of success, category of document used, search time taken, etc.); and (3) information about the extent of participation of librarian and user in the search.

Analysis of the data gathered was carried out by discipline, by type of employer, and by type and level of job. The results reveal nothing particularly different from those produced by previous use studies of technical libraries. Periodicals remain the chief vehicle for the transfer of scientific and technical information. Most data sought is directly related to the immediate work of the individual involved. Needed data first is sought in personal files, by questioning colleagues, or in handbooks, before the search is carried to the library. Many users do not use the services and skills of the librarian efficiently. The scientist relies less on the librarian for help than does his engineer counterpart. Most users seldom go beyond their own library in the search. Eighty-three per cent report success in their searches and, in general, the user feels that the library service rendered is excellent. An accessible location is a tremendous incentive to frequent library use.

These are some of the findings. None are really new or startling. Little real evidence is offered to support the hypothesis that customers of technical libraries can be classified into meaningful user groups. Nevertheless, administrators of technical libraries will find this to be an interesting and, perhaps, useful report. It brings together in one cover information on the habits of the users of several kinds of technical libraries. While it may not provide sufficient evidence for the general application of its finding to a particular technical library it does by raising many questions provide library administrators with a checklist of pertinent points which should be considered for efficient and flexible service. It is hoped that the projected larger study will provide more answers to many of the questions raised in this pilot report.—*E. G. Roberts, Georgia Tech.*

Libraries and Automation. Proceedings of the Conference on Libraries and Automation Held at Airlie Foundation, Warrenton, Virginia, May 26-30, 1963.

The Airlie Conference on Libraries and Automation was held in the summer of 1963 under the sponsorship of the Library of Congress, the National Science Foundation, and the Council on Library Resources.

The objective was to relate present library operations and needs to the capability of modern computer technology. From the papers and discussions it was hoped that a more fruitful and meaningful dialogue between librarians and technologists would ensue. Participants were therefore selected to represent both library and technical personnel, with a ratio of about two technologists to each librarian. Discussion leaders were library-oriented persons with instructions to summarize the technical papers and make explicit their relationship to library situations.

The keynote address by Dean Don R. Swanson is intended to bridge the gap between library requirements and their technological implementation. Swanson foresees users seated at input-output consoles either in the library or at a remote location. The consoles are linked to an automated catalog and other bibliographic tools of a library or system of libraries. The system provides a series of rapid and repeated searches with the console displaying to the user the results of his inquiry in a variety of formats.

The console acts in the manner of a teaching machine permitting programmed interrogation of the library. "Any rational question addressed to the system should evoke a response which instructs the requester as to the type of question he should ask next and which presents him with a set of choices from which he makes a selection." Browsing is facilitated "with the help of information clues, such as 'chains' of related subjects, use-history, citation patterns, and other means."

Consoles would have six "process control" keys representing the type of operation desired: Specific Work, Subject Selection, Previous Use, Similarity Selection, Microform View, and Delivery.

The technology for implementing library automation is discussed at length in a number of state-of-the-art papers: "Index Files, Their Loading and Use"—Patrick and Black; "Automated Storage and Access of Bibliographic Information for Libraries" and "Mechanization of File Storage and Access"—Libby; "Current Status of Graphic Storage Techniques: Their Potential Application of Library Mechanization"—Alexander and Rose; "Output Printing for Library Mechanization"—Sparks, Berul, and Waite; "Library Communications"—Emling, Harris, and McMains; "Automation of Library Systems" and "Mathematical Models and Systems Design"—King.

As a group the papers present an excellent inventory of present and potential capabilities of machines, although the technical papers tend to be somewhat unrelated to librarianship. Yet this was after all the purpose and justification of initiating a dialogue between technologists and librarians. The resulting dialogue, however, appears to be more of a monologue with the technologists doing most of the talking. The admonitions of the machine- and systems-oriented participants that librarians should achieve a greater clarity in defining library objectives and priorities went unheeded.

The essential drift of the discussion was captured, typically, by Mortimer Taube: "At meetings like that we invariably get a standoff between the machine man who says, 'You tell me what you want and I will do it,' and the librarian who says, 'Tell me what your machines can do, and I will see if they fit.'"

It is evident from the discussions interspersed throughout the *Proceedings* that many of the library participants were in fact thinking of potentialities of automation in terms of making their jobs, *as presently conceived*, easier, rather than extending the capabilities and dimensions of library service. Some members of the library contingent at Airlie appear to have reserved for themselves the same functions in an automated library as performed in present nonautomated libraries.

The principal issues from the librarian's point of view are not so much related to the technical feasability and mechanics of automation but rather to the *desirability* of automation. How is automation related to the goals of librarianship? Is automation of a given function worth the cost? Would the conversion of the National Union Catalog to a machine-readable form at a cost of $570,000 be worthwhile in terms of library objectives? Do consoles provide for satisfactory access to libraries—better than present arrangements? Can library processes be formalized and standardized to pave the way for automation? Are librarians willing to adapt to the performance of different tasks in the library assuming that much of their present activity can be structured and formalized? Such problems must be dis-

cussed in addition to the mechanical details.

These points are touched upon briefly in the *Proceedings*. There is room for another conference to digest the data and opinions brought into the open at Airlie. The *Proceedings* constitute a most valuable source of data and opinion relating to library automation.—*Alan M. Rees, Western Reserve University.*

Encyclopaedias: Their History Throughout the Ages. A Bibliographical Guide with Extensive Historical Notes to the General Encyclopaedias Issued Throughout the World from 350 B.C. to the Present Day. By Robert Collison. New York & London, Hafner Publishing Company, 1964. 319p. $7.50.

Mr. Collison, librarian of the BBC reference library, has compiled several volumes for which reference librarians and students have been grateful. His most recent contribution puts us further in his debt, for he has brought together a quantity of information in this book on encyclopedias. It is more ambitious in plan and in scope than his books on bibliographies and dictionaries, since it is in the form of an historical narrative and aims at comprehensiveness.

The narrative begins with the Greek sources of the western encyclopedic tradition and ends with references to new encyclopedias. It includes whole chapters on Diderot's *Encyclopédie,* on the *Encyclopaedia Britannica,* and on the various publications of the firm of Brockhaus. A chronology of significant dates and an introduction discussing some of the problems involved in the production of encyclopedias precedes the main text, and following it are a general bibliography, a list of encyclopedias not mentioned in the text, and a reprint of Coleridge's "Preliminary Treatise on Method" from the *Encyclopaedia Metropolitana.*

The chronological arrangement adopted by the author presents difficulties which he has not entirely overcome. It is not possible, for example, easily to trace the development of encylopedia making in any one country or culture because the only grouping by language is an incomplete list of lesser works in the appendix. Mr. Collison's accounts of the Arabic and Chinese encyclopedic traditions are practically worthless since he only provides brief descriptions of individual titles dispersed throughout the text. Index entries for languages or countries would have partially solved this problem, but the index to the book is limited to personal names and titles. It is incomplete even in these.

The author's intention as to scope is not clear. The title indicates that the book is confined to general encyclopedias but there is a section on modern encyclopedias in special subject fields at the end of the last chapter. Coverage of Asian works is very uneven; for example, no Japanese titles are mentioned. Numerous works of minor importance in western langauges are included, but others of equal claims are missing. Few important titles were overlooked, but surely the East German version of "Meyer" is worth mentioning.

The treatment of individual works is mostly limited to externals of bibliographic detail, publishing history, and arrangement. The amount of space devoted to individual titles is not always in proportion to their importance—twenty lines is hardly adequate, for example, for the *Enciclopedia Italiana.* Judgments expressed are the conventional ones, although most readers would not agree that the contents of the eleventh edition of the *Encyclopaedia Britannica* "were kept within the mental range of the average man."

References are provided in the text and at the end of chapters, as well as in the general bibliography. They are not as complete or as precise as one could wish; a listing of Templeman's and Wright's *Bibliographies of Studies in Victorian Literature* is not very helpful, and it is unfortunate that the only recent substantial discussion of the principles of encyclopedia making (in the September 1962 issue of the *American Behavioral Scientist*) should have been overlooked.

In spite of its imperfections, Mr. Collison's book, as the first attempt at a comprehensive account of the development of the general encyclopedia, will undoubtely be useful. By indirectly exposing the shallowness of our present knowledge, it can perhaps serve another purpose in encouraging reference librarians and students to undertake more specialized studies in order to enrich our understanding of these important reference works.—*Marjorie Karlson, Washington University.* ■■