BOOK REVIEWS

Systematic Analysis of University Libraries, by Jeffrey A. Raffel and Robert Shishko. Cambridge, Mass.: M. I. T. Press, 1969. 107 pp. $6.95.

Systematic Analysis of University Libraries is an exciting book, for it is the first report describing application of cost-benefit analysis to a library. Raffel and Shishko have applied the methodology of cost-benefit analysis to the M. I. T. Libraries and have produced an admirable description of this method of research that examines policy making in a system as a choice among alternatives. This work is not a cookbook providing answers derived from principles; it is an exposition of a methodology that produces data used as a basis of decision making.

The book employs the case-study technique, with the M. I. T. Libraries furnishing the raw material for the cases. Findings cannot be extrapolated to all libraries, although they may be applicable in some. For example, Raffel and Shishko found that 75% of the M. I. T. Libraries budget is allocated to research activities in the institution. Such findings are inapplicable to small liberal arts colleges, where faculty members do little research. The purpose of *Systematic Analysis of University Libraries* is to teach the application of cost-benefit analysis rather than to provide answers. It instructs in the methodology for obtaining answers.

Case studies presented in the book include selection, acquisitions and cataloging, among library operations. Also examined are book storage, study facilities and reserve book procedures. A technique for measuring benefits by surveying users is also described.

The concluding chapter presents in outline form major findings, of which only two will be given here as examples of results of this type of analysis. First, the authors found that the most effective alternate storage system, namely compact storage, saves only about one percent of annual library resources, but provokes a major loss of benefit, since compact storage limits browsing and increases retrieval time for books. A second finding of interest is that major cataloging expenses are for professional librarians doing original cataloging, and for proofreading and checking of catalog cards. That costs of original cataloging bulk largest will not be a surprise to librarians, but that the next largest cost should be proofreading and checking of catalog cards will come as a surprise to some.

The book concludes with a score of research questions to be explored in the future, and it is fervently to be hoped that Raffel and Shishko will continue their investigation along the avenues they have delineated.

Frederick G. Kilgour

The Undergraduate Library, by Irene A. Braden. Chicago: American Library Association, 1970. (ACRL Monograph, 31). 158 pp. $7.50.

The separate undergraduate library on the university campus is a phenomenon of the last two decades—Harvard's Lamont Library was the first in 1949. More than twenty-five such libraries now exist or are in the planning or construction stage. The literature of librarianship contains descriptions of individual undergraduate libraries or philosophical essays concerning library services for undergraduates. Braden, however, was the first to study more extensively and impartially this attempt to provide better services for university students. For her dissertation at the University of Michigan, she collected data on six undergraduate libraries—Harvard, Michigan, South Carolina, Cornell, Indiana, and Texas. Each library was visited in 1965/66 and interviews with librarians were conducted; documents were consulted.

We here have published 15-35 page descriptions of these six pioneers. The studies range from architectural design, through the gathering of the initial collections of books and other media, to the host of services offered in the completed library. Excellent statistical tables, organizational charts and floor plans illustrate the text. There are some errors. Michigan added more seats in 1965, not September, 1966 as stated on page 43. Also referring to Michigan on page 47: "The reference collection began with about 2000 volumes, but it soon became evident that it would have to be enlarged. The collection now numbers about 3100 volumes.[83]" The footnote refers to page 18 of the 1957/58 *Annual Report* of the Michigan Undergraduate Library, but there is no mention of the number of reference volumes there. Instead the 1957/58 *Annual Report* records on page 4 that there were 800 reference volumes on November 18, 1957 when the collections were moved into the new building.

After presentation of the case studies, the author summarizes her conclusions on the buildings, book collections, services, staffs, and use by students. Of particular value are fourteen brief guidelines formulated to assist librarians who may be contemplating an undergraduate library on their campus.

The reader should be forewarned that *The Undergraduate Library,* although a most welcome publication, is now an historical document. Only data through 1964/65 are presented. Major changes in services and facilities have occurred in the past five years. Those interested in automation would think that undergraduate libraries have done nothing. Michigan, however, began an automated circulation system for reserve material in 1967 and for the main collection in 1968.

Billy R. Wilkinson

Report on The Total System Computer Program for Medical Libraries, by Robert E. Divett and W. Wayne Jones. Albuquerque: University of New Mexico School of Medicine Library of the Medical Sciences, 1969. 424 pp.

The concept of "total system" is a fairly easy one to grasp until one attempts definition of the term. Then there creep in all sorts of unexpected, rather unfair practical considerations, usually related to environment. Under these constraints, one man's total system becomes a very personal conditioned statement.

The report is organized into three sections: a system description oriented toward the librarian; technical descriptions of the file organization and program structure for the programmer; and a set of appendices which include the source listings of all the programs. The source listings are more than three-quarters of the report, and are tiring to examine and decipher. Much more useful in a report of this nature would have been the program decision tables which underly the program. A section on recommendations explores the future direction of the system. However, some matters of concern in the report are glossed over in a rather facile manner with little or no comment.

The system has been implemented at different levels. Acquisitions and cataloging are essentially translations to an on-line mode of a batch system. (It is interesting to note that a card catalog is maintained to back up this on-line operation). On-line circulation is presented as if it is running, whereas the authors say that lack of funding prevented implementation. The really exciting work has been done with file organization, the incorporation of MESH tree structures on the file and their use for upward (to most general, not most specific) searching, and the development of an on-line interrogation procedure both for update and search of the file.

One finds that hardware costs alone would be either $7728 per annum plus computer time for a batch system, or between $98,000 and $104,000 per annum plus computer time for a terminal system. But then one reads that "the terminal total computer system is the only effective, efficient way of meeting the demands of service and processing that are required by a technical library." When one is talking about a hardware cost of $100,000 per annum what exactly do the words "only effective, efficient" mean?

Glyn Evans

How To Manage and Use Technical Information, by Freeman H. Dyke, Jr. Boston: Industrial Education Institute, 1968. $15.00.

Freeman Dyke is a veteran of the ups and downs of the information-retrieval industry and through his association through the years with Jonker, Documentation, Inc. (Leasco), and the ACM lecture circuit has developed a wide familiarity with hardware and software used in the handling of technical information. This book is a compendium of information about

equipment and systems, ranging from catalog cards to computers. A useful feature, repeated many times throughout the book, is a double list of "advantages" and "disadvantages" for the hardware or the system that has been described. Thus, the advantages of uniterm cards and dual dictionaries (simplicity, low equipment and operating cost, flexibility of vocabulary, physical availability, fairly high output speed) are balanced against their disadvantages (variable search speed, low output flexibility, indirect access to information, difficulty in updating). In most cases, no bias is indicated in the descriptive sections, and the reader is more or less on his own in making a final choice of machine or technique. Numerous clear illustrations —photographs, cartoons, diagrams and other graphics—provide a helpful and interesting relief to the unjustified offset text. The lack of an index sets up serious retrieval problems.

The major market for this book would seem to be business and industry, particularly companies which are planning to set up or modernize their methods for the storage and retrieval of technical information. The book might well be purchased for the business or industrial users of a library. Because it is not at all oriented to the problems of library automation, it is not particularly recommended for use by the librarians themselves.

A. J. Goldwyn

An Introduction to Decision Logic Tables, by Herman McDaniel. New York: Wiley, 1968. 96 pp. $6.95.

The literature of decision tables is marked more by its absence than by its presence; before the appearance of this book, the reader was limited to brief journal articles or an infrequent technical report or two. Thus, even though the author warns that the present volume makes no pretext of being an exhaustive treatment, he has nonetheless added materially to the store of knowledge of this admittedly limited field.

McDaniel carefully leads the reader through the process of developing a decision table and the simple rules of logic utilized to prove relevancy of the table elements or for eliminating irrelevant tests. Of interest to all who are concerned with automation is the author's discussion of the conversion of a flow chart to a decision table. Another interesting section is the use of table processors to translate decision tables into portions of computer programs. At this juncture, the author offers some evidence to support his contention that considerable programming time will be saved if the programmer works from decision tables rather than flow charts. If he is right, librarians had better get with it and learn how to construct decision tables as well as flow charts.

One omission, a discussion of AND and OR condition statements, is unfortunate since it appears that they merit space even in an introductory text. However, the author does provide a considerable number of exercises for the reader. These will help to sharpen the reader's understanding of decision tables.

John J. Miniter

Computer-Based Library and Information Systems, by J. P. Henley. Computer Monographs Series. New York: American Elsevier, 1970. 84 pp. $5.75.

Just when librarians and computer specialists were beginning to understand each other, there is published a slight monograph that effectively gaps the bridge.

The book is based upon Mr. Henley's M.Sc. work at Trinity College, Dublin. It bears a 1970 imprint, but appears to be about seven years out of date. One is told briefly about the King Report, the information retrieval languages LISP and COMIT, and related ancient breakthroughs. The bibliography yields 32 dated citations with a mean date of 1963—the approximate time this work might have been considered timely.

In seven slim chapters and two gratuitous appendices, the author treats such topics as "Introduction to the Computer", "Library Systems Requirements", "The Philosophy of a Machine-Based System", and even "A Short Note on Backus Normal Form". Some of the author's urgent allusions to old events are pure High Camp, e.g., "The growing interest in mechanisation, borne out for example by . . . the recent initiation of discussions between a major publishing house and a large computer manufacturer, make it vital for the cross-fertilization of ideas between computer and library experts to proceed as quickly as possible." (p. 75.) Other pronouncements are patently absurd, such as: "One common use of such real-time 'on-line' computing is the writing of a program directly at the console, instruction by instruction, instead of having to write it all beforehand and read it in from cards or paper tape." (p. 10.)

It is all too easy to fault a short book for shortcomings, but other books in this same series, such as J. M. Foster's *List Processing*, have proven the excellence possible in a trim 30-shilling monograph (Mr. Foster's work is only 54 pages.) Excellence in this format appears to require focus upon a narrow subject area, and discipline in the treatment of the core elements of the area. In attempting in 84 pages to cover several subjects of encyclopedic scope (Library *and* Information Systems, as well as a basic computer tutorial), the author piles Pelion upon Ossa and then shows us sample pebbles from the pile instead of the view from the summit.

There remains much important and exciting material to be presented to librarians and computer people about each other's work. Regrettably, Mr. Henley, in the words of his fellow Dubliner James Joyce, has "speared the rod and spoiled the lightning."

William R. Nugent