

sibly suited for information retrieval (with reservation). Conspicuously lacking in the discussion is any mention of SNOBOL or PL-1. This discussion is followed by mention of the primary types of computer file structures, e.g., sequential, list, and tree files.

A chapter is devoted to information retrieval systems. The chapter covers most of the important work done in the field: coordinate indexing, thesauri, SDI systems, KWIC indexing, automatic classification experiments, clustering, and so forth. Each topic is mentioned and briefly discussed.

The last third of the book is devoted to examples of IBM 1620 computer programs written for a library system. The data input program, the sort program, and the search program are presented in great detail, including sample output and ten pages of flow chart. These programs essentially consist of the author's efforts at an experimental searching program to retrieve author names by variant spellings. Although the search program is of some interest, such long and detailed examples appear out of place in such a short book. It is material better suited for a journal article.

My major objection to the book is not that it is superficial (since this can be turned into an asset in a general introduction to a subject), but rather that the book is fundamentally misleading for the uninformed reader (the only type of reader for which the book is appropriate). It gives the impression that to develop an automated library system all one need do is buy a computer and hire a programmer. Even in the final chapter, a discussion of the "philosophy of a machine-based system," the only difficulty mentioned is that of automating fact retrieval. Although we all seek simple and straightforward solutions to problems of library automation and information retrieval, it seems a disservice to those entering the field to give the impression of simplicity.—*Victor Rosenberg, University of California, Berkeley.*

Systems Analysis of a University Library; Final Report on a Research Project. By Michael Buckland, et al. (University of Lancaster Library Occasional Papers, no.

4). Bailrigg, Lancaster, University of Lancaster Library, 1970. 57p.

The application of operations-research techniques to libraries is a recent phenomenon, and most library administrators probably shudder at the sight of equations purporting to represent the behavior of some part of their library system. Some people shudder at the sight of *any* equation, but many are also concerned about what seems to them the simple-minded nature of the idea that a library process can be represented by equations at all. The present report presents two kinds of answers to concerns such as the latter class of readers express. On the one hand, the authors candidly admit that their work is fragmentary and exploratory, and can hardly be anything more, given our ignorance of our users' behavior. (What on earth do faculty members *do* with those books that they keep for six months?) But they also point out that it is studies such as the present one that help to point out just what it is we need to know before more advanced work can be undertaken.

The second answer that the authors can make to persons skeptical about the value of operations research is to point to practical results. Their studies of the effect of various loan policies upon the availability of books gave them sufficient evidence to induce the University of Lancaster to accept important changes in loan policies—the evidence being that the new loan policy would, by all indications, appreciably improve some aspects of the library's service to its users. Another study showed that at a small increase in annual cost, the library could establish a bindery (it had been using commercial binders) and thereby effect other improvements in service.

This report then reflects both the shortcomings and some of the potential values of operations research as applied to libraries. Its title may be misleading for it by no means reports the results of a systematic analysis of a complete library system. It is rather a report on several studies of various facets of a library system. There is, for example, a section on the frequently discussed and analyzed problem of acquisition and retention policies, with particular attention

to the implications of relying upon interlibrary loan for access to titles either not acquired or discarded after being held for a period. Another section develops mathematical models of acquisitions policies for libraries that are part of a hierarchy of libraries consisting of personal libraries, departmental libraries, university libraries, and a national library. In another section, the authors speculate upon the pervasiveness in librarianship of negative exponential distributions similar to the famous Zipf distribution. They argue persuasively in just a few paragraphs that it is important from both the theoretical and practical points of view to find out to what extent their speculations are correct.

This report will be useful to library systems analysts and operations researchers. It would also be a good document for reading by library administrators who would like to get an idea of the kinds of things that are going on in library operations research. (Those whose forte is not mathematics should skip over the detailed mathematical expositions. All significant points are also made in prose.) Finally, this is the kind of document that a university librarian might well want to share with some of the operations research specialists on his campus. Collaboration between librarians and operations researchers outside the library has already borne fruit at several institutions.

Any library ordering this report should probably also order the Library's Occasional Papers nos. 1, 2, and 3, since some of the material in this no. 4 is merely a condensation of work reported more fully in the three earlier papers. The reader should be warned that there are numerous typographical errors in the equations and in the discussions of them.—*Kelley L. Cartwright, School of Library Service, University of California, Los Angeles.*

The Subject Approach to Information. By A. C. Foskett. Hamden, Conn.: Archon, 1969. 310p. \$7.50.

It is important to view this volume in the context in which it was written. In his preface the author states that "it is my hope that this work will help to fill a need

which exists at present for a textbook suitable for that part of the Library Association part I paper 3 syllabus which deals with the subject approach." He then goes on to say that he has "tried in this text to emphasize the similarities as well as the differences between the different methods of retrieving information, and to show the kind of situation where each is likely to prove of value." To accomplish this in modern context he has "concentrated everywhere on the modern approach, including terminology. . . ."

The volume was examined in terms of both form and content. There are minimal variations in typeface which make it difficult to separate the examples from the text. The arrangement is logical for the subject it covers, going from the general to the specific. However, in arranging the text where it concerns particular schemes, a general discussion is used with examples before the general layout of the particular classification scheme under discussion is given. The index is thorough and useful. Nineteen percent of the indexed items refer to bibliographic data. Since the content is generally aimed at a British audience, the systems in use in Great Britain and India are more thoroughly covered than those in use in the United States.

Whether the chapters are arranged in the order of importance to the author, or whether, by so arranging them he has eliminated some redundancies, it is interesting to note that the number of pages devoted to each system decreases (except for Colon):

DC	23
UDC	15
Bliss	12
Colon	14
LC	9
LCSubjHd	5
Sears	3

There are some minor problems in language. For example, when Foskett discusses homographs (p.40), he lists

PITCH	(Bitumen)
PITCH	(Music)
PITCH	(Football), in our context we would use (Baseball);