

interviews and process charts. These represent the best guesses to date, not to be used slavishly, but with some confidence and a willingness to refine them in the light of future experience, just as the other cost elements must be kept current.

The study has widely refrained from identifying the libraries which use these processes. Librarians will continue their search for improvement in a dynamic technology. They well may wonder if any method will endure through the five to ten years it takes to amortize purchased equipment. Use of rental, leasing, trade-in, processing center, and service bureau arrangements reflect this growing desire for flexibility. The study does not mention the changing role for catalogs in card form in the face of impending shifts to book catalogs or eventual console conversion. Nor does it look with any prophetic vision at the greater depth of control achievable over small units of information, even the individual character or its component bits, when using a digitized system such as the automatic tape typewriter. The power to select and re-order information stored in paper tape for multiple purposes which is afforded by the Friden Selectadata unit, the special-purpose automation of the Crossfiler, or the general capability of any computer, all introduce valid considerations outside the apparent scope of the study. The report is basically a search for lowest isolated cost among those methods presently available to libraries for accomplishing a very prescribed task. By subtracting least cost from another, it is possible to obtain a fair measure of how much annual cost is attributable to intentional choice of a system over the minimum that would have to be paid in any case to get the job done the cheapest way. Librarians should be aware that they now have some useful comparative data where before there was none, but they should not feel hindered from going against or beyond its advice for good reason.—*Earl Farley, University of Kansas.*

**Moving Library Materials.** By Peter Spyers-Duran. Rev. ed. Chicago: Library Technology Project, ALA, 1965. 63p. \$2.50 (65-23947).

This study is based on a bibliography of the subject which covers the years 1930 to

1961, and on a questionnaire which included thirty-one library moves in the range of 8,000 to 700,000 volumes. As the author points out, it is difficult to find a single comprehensive analysis of the techniques of moving library materials. The present work is designed to outline the theoretical and practical requirements for moving books and library materials in libraries of every type and size.

The arrangement of the study falls into three broad topics. The first section deals with the major steps involved in planning and scheduling the move. This analysis includes a time and motion study. In the second section, the author discusses critically four types of moving methods. The last section is a collection of model specifications and contract forms. The use of such forms is necessary when a library move is being offered to professionals on a competitive basis.

The text is clear, concise, and thorough in treatment, and is supplemented by a large number of tables and illustrations. Table I is particularly useful in that it presents an analysis of the questionnaires returned by the libraries. The bibliography emphasizes articles that have appeared since 1950. Unfortunately, several of the citations in the text are not entered in the bibliography.

This study is deceptive in its simplicity. It should prove to be a valuable handbook to all librarians contemplating a move, especially those who wish to compare several possible methods, or those who have had no experience with operations of this kind.—*Michael Bruer, University of Notre Dame.*

**Libraries of the Future.** By J. C. R. Licklider. Cambridge, Mass.: M.I.T. Press, 1965, xvii, 219p. \$6. (65-13831).

It can be an illuminating exercise in imaginative fantasy to extrapolate from present technology in order to describe the library of the future. This book is one of the best of these exercises. Author Licklider describes the "procognitive" system (the successor to the library?) of the year 2000. Although explicitly stated as not the objective of this book, the question is apparent on every page: how do we get from here to there? This is a problem that every librarian must face in the next decade, for technology

is forcing decisions on the profession that it may not yet be prepared to consider, let alone resolve.

This rather slight volume is the result of a two-year inquiry by Bolt, Beranek and Newman, Inc., sponsored by the Council on Library Resources. The project director, Dr. Licklider, is a psychologist and is extremely well qualified to undertake such a study. During the period of the study, he was successively at BB & N, the Advanced Research Projects Agency of the Defense Department, and IBM (an excellent example of today's high-level commuting scientist).

The text is divided into two parts: (1) Concepts and Problems of Man's Interaction with the Body of Recorded Knowledge; and (2) Explorations in the Use of Computers in Information Storage, Organization, and Retrieval. One of the more important concepts is the *procognitive* system, which "substitutes for the book a device that will make it easy to transmit information without transporting material" (p. 6). Such systems "will not only present information to people but also process it for them, following procedures they specify, apply, monitor, and, if necessary, revise and reapply" (p. 6). To provide these services "a meld of library and computer is evidently required" (p. 6). The objectives of such systems "are to promote and facilitate the acquisition, organization, and use of knowledge" (p. 21). If we substitute "book" for "knowledge" here, we have a definition of libraries. The substitution, however, is significant. The development of these systems, by the way, will not only affect libraries serving sophisticated users, but will also have a tremendous impact on the whole educational process, particularly the relationship between libraries and the learning process.

The first half of the book (Man's Interaction with Recorded Knowledge), despite shortcomings, is well worth reading. The important chapter on "Aims, Requirements, Plans, and Criteria" is a *tour de force* that does not quite come off. It is lucid, stimulating, and a brilliant monologue, but too much is assumed or left unsaid. There are literally hundreds of ideas here that need closer examination and detailed analysis. This reviewer cannot escape the feeling that it is a hasty generalization "off the top

of the head," skimming glibly over critical problems.

Licklider has fortunately left himself and the reader a necessary, if not graceful, exit. If the user of the procognitive system finds himself at a total loss and loses track of what he is doing, he can always press buttons which ask "Where am I?" or "What should I do next?" "Through either of these programs," the author explains, "the user can reach a human librarian" (p. 127). Yes, Virginia, there is a Santa Claus.

The second part of the book (Explorations in the Use of Computers) is a brief summary of investigations made during the inquiry. They range from a survey of syntactic analysis by computer to methods of evaluating retrieval systems. This part, more than the first, suffers from lack of pattern: a string of isolated studies which pick at a whole bagful of problems without thorough analysis of any one. Many fundamental problems concerning the learning process, cognition, and semantics must be answered before such studies can be integrated into even small operational systems.

Despite its short-comings, this book is at present the best and most lucid statement of what the library may look like by the end of the century.—Robert S. Taylor, *Lehigh University*.

**Specialized Information Centers.** By Allen Kent with the assistance of John Canter. Washington, D.C.: Spartan Books, 1965. 296p. \$9. (65-16172).

It is difficult for this reviewer to say just what this book is all about, or rather what it was put together from. Some of the "case studies" in it are taken from a 1962 National Science Foundation publication; the bulk of it consists of "case histories" taken from answers to a questionnaire sent out (probably in September of 1963, although the authors don't say) to "500 specialized information centers . . . spread throughout North America." Information centers, and presumably the recipients of the questionnaire, are defined, for the purposes of this book as "any library or collection of documents which serves more than one or a few people."

This is one of the standard ways of manufacturing a nonbook—great goblets of un-