tivity; it is not yet being developed from knowledge and data collected within the field.

Chapter 14 is entitled "Theories of File Organization" and the work described in this chapter was supported in part by the National Science Foundation. The authors say that their general theoretical structure is based on the view that: "1. Large files represent a multiple level structure whose characteristics are determined by both the physical parameters of the storage form and the logical problems in evaluating relevancy. 2. Such a structure, in order to be responsive to the usage of the file, must provide some procedure for reorganization in terms of the changing usage."

"With this view, the purpose of information systems can be considered as *providing relevant responses to an environment*" . . . and "the attempt must be made *continually to fit the organization of the stored responses to the environment* rather than vice versa."

In their effort to define file items the authors adopt five premises: (1) the contents of a file should reflect its total utilization, that is, both the contents of a library and representations of the requesters, of the requests, etc.; (2) the contents of the file are homogeneous; (3) a quantitative model and measure for relevancy are possible; (4) there is no essential relationship between the method of representing an item and the organization of groups of items into a file; (5) organization is the grouping of items or records which are then handled as units and lose to that extent their individual identity.

They then proceed to weight indexing terms for both indexing and request efforts. They also attempt a definition of relevancy by measuring the degree of association of relevancy, closeness of terms, and arguments, employing connection or association matrices.

The last three sections of the chapter deal with the logical organization of terms, by means of classification, subject headings, etc.; organization by activity to recognize the ways in which people use the collections; and reorganization to make the files meet new requirements.

The authors have combined their own efforts and the work of others currently active in this field into a stimulating chapter. The result should encourage other investigators to select the portions from mathematics which they require to provide an improved understanding of the topic of file organization.

Chapter 15, Theories of System Design, represents work supported in part by the United States Air Force. It is an effort to make a mathematical model of system design in ISR. While stating that the operational interrelationships are more important than the physical interrelationships, the authors use tape units, core memories, drum memories, disk units, and rotary card files as examples in their modeling. This chapter should point out to the nonmathematical, non-system-oriented librarian the hazard, if not the sheer folly, of making choices and decisions relating to new equipment and methods which will produce results he cannot anticipate or control, at a time when experts are still working out the theoretical foundations of his profession. Conversely, this chapter can suggest to these librarians that the employment of systems experts for their problems increases the probability of getting satisfactory results in comparison to the results of do-it-yourself efforts.—*C. D. Gull, Indiana University*.

History of American Schoolbooks. By Charles Carpenter. Philadelphia: University of Pennsylvania Press, 1963. 332p. illus. $6.50. (62-10747).

Librarians who have been privileged to examine prospective gift collections of books in lofts, smokehouses, and garrets, are well acquainted with the slender little volumes, bound in overprinted olive, tan, or blue boards, that constituted early American schoolbooks. Webster's spellers, Lindley Murray's grammars, Morse's geographies, McGuffey's readers, and other volumes prepared for school use by such worthies as Frost, Rush, Olney, Hunt, and Spencer, probably interlace 90 per cent of the nineteenth-century Americana collections still in private hands, but we know surprisingly little about them.

Carpenter's *History of American School-*

books makes a real contribution to our knowledge of this untrodden field, yet it is difficult to say just what that contribution is. It is easier to tell what the book is not than what the book is. It is not a reference book, although the well indexed mass of data which it presents will no doubt make it useful to many for reference purposes. It is not a bibliographical study—the person who attempts such a study will have to be a hardy soul, since schoolbooks are a bibliographical Slough of Despond—yet the book is laden with bibliographical detail. It is not a book trade history, lacking as it does almost any reference to the publishing industry or its economic impact upon the American scene. It is not even a good narrative history, since its attempt to enumerate as many as possible of the myriad nineteenth-century school texts reduces its interest for sustained reading.

The book will, however, be a desideratum for almost any private or institutional collection that has orientation to the nineteenth century, whether it be to education, history, bibliography, culture, or sociology. Conveniently grouping schoolbooks under the various disciplines they represented—primers, elocution manuals, copybooks, rhetorics, general and mental science texts, etc.—the author briefly discusses progress in the writing of each from its beginning in this country to the early twentieth century, relating interesting facts and anecdotes about authors, book use, schoolbook adoption, and giving even occasional personal commentary upon the appropriateness of a particular volume or style, or speculating upon the prospective future of the genre. As was said earlier, the book defies categorization.

Unfortunately the book is marred by poor editing. There are too many typographical errors in it, and this reader noted at least two occasions where a word or words appeared to be dropped from the text. Although it draws exclusively upon secondary sources for its information, the book represents a wide range of study and is well documented. Its annotated bibliography furnishes a good guide to further reading, and its twenty-page, eight-point index is a thorough key to the text. It will no doubt be widely purchased and used.—*D. K.*

The Future of the Research Library. By Verner W. Clapp. Urbana: University of Illinois Press, 1964. 114 pp. $4.50. (64-10352).

No research library today can acquire or house all of the recorded knowledge its users demand, and none can make what it receives accessible to scholars quickly enough to meet their needs. Although libraries still strive for self-sufficiency, the impracticality of having everything immediately at hand has been accepted, and sharing of resources through a variety of devices such as interlibrary lending, cooperative acquisition, bibliographies, union catalogs, and photocopying increasingly has been employed. But research libraries still fall short—even the largest of them—of performing their proper function of enabling scholars to identify the library materials relevant to their research and of providing immediate access to copies for their use. They will continue to fall short of maximum effectiveness unless self-sufficiency can be increased at lower costs and sharing of resources made comparable with local availability.

Verner Clapp, president of the Council on Library Resources, examines these inadequancies and problems as well as the obstacles to their correction in this 1963 Windsor Lecture in Librarianship at the University of Illinois. Clapp is eminently qualified to address himself to "the future of the research library." From 1922 to 1956 he was a member of the staff of the Library of Congress, the last nine years as chief assistant librarian. He has contributed to library development around the world, and in 1960 received the Lippincott award for distinguished service in the profession of librarianship. Since assuming his present responsibility, President Clapp has approved the expenditure of several millions of dollars in search of solutions to the problems of libraries generally and of research libraries in particular. For many years, therefore, he has had a ringside seat from which to observe the multiplication of research library problems as the quantity of information increased and the urgency of research intensified demand for prompt access to it.

Among the problems the author identi-