

Review Articles

Scientific Serials

Scientific Serials: Characteristics and Lists of Most Cited Publications in Mathematics, Physics, Chemistry, Geology, Physiology, Botany, Zoology, and Entomology. By Charles Harvey Brown, with a section by Roger V. Krumm. Chicago: Association of College and Reference Libraries, 1956. 189p. (ACRL Monograph No. 16.) \$4.25.

Charles Harvey Brown, a senior statesman in American librarianship, is also, through years of active work with scientists and scientific literature, the dean of American science librarians. In this volume he has made an outstanding contribution to our knowledge of the use of scientific serials. Included are not only the results of his recent studies of the eight fields listed in the title, but also the first published report of similar studies which he made for the Association of Research Libraries from 1942 to 1944. In addition, Brown compares these results with other studies and thus brings together in one volume a considerable amount of data formerly scattered through scientific and library literature.

Counting the citations or references made by authors of research papers published in a group of representative journals and compiling them to show which publications are referred to most often, has become an accepted method of determining the source materials used by research workers in specific fields. Brown and others have pointed out its limitations, but it remains the only practical method of estimating relative use of scientific serials.

Publication of a composite list of this magnitude creates the danger that in spite of the warnings of the author, the list will be used indiscriminately as a gauge against which library collections will be measured and toward which libraries will attempt to build. The author carefully points out that each institution will have special needs, based on the subfields emphasized and on the research interests and specialties of individual research workers. He also takes into account

the effect of language facility on use made of serials.

The method of reference counting unfortunately does not provide a true measure of the relative value of periodicals. A journal with half the number of contributions of a larger journal will have half as many citations recorded in a reference count if the individual contributions to the two journals are of equal value, and will thus appear far down in the list of serials. Similarly, the method emphasizes the serials which have been in existence the longest. While the subjects are broken down by date of publication in these studies, the lists of most cited serials are not, thus making them of little value for the selection of current titles.

Brown points out that these are not lists of the most used periodicals, but of the most cited periodicals. There is no way of determining whether a journal is used but not cited, even though it may have been just as necessary to the scientist as those cited. This can be illustrated by noting that in reporting research in most fields, pertinent articles on method are almost always cited, while those on other aspects, possibly more important to the research worker, are often not cited. This fact became obvious to this writer when, in attempting to show the validity of a reference count of metallurgical literature, he asked one hundred research metallurgists to indicate the twenty-five journals from a list of one hundred most cited which they considered of greatest value in their research work. In the reference count the journals of analytical chemistry appeared high on the list, while in the opinions of the metallurgists they were relatively low. Quite likely their actual value for metallurgical research was somewhere between. On the other hand, several metallurgical journals, small in size with few original contributions to be cited, appear low in the reference count but were high in the estimation of the specialists in the field.

A list of the journals most frequently abstracted in *Chemical Abstracts*, prepared by R. V. Krumm, is included in this work. For journals which are primarily chemistry, such a list is nothing more than a tabulation of

the number of articles published in each journal for the period covered. Brown correctly points out that such a list is not necessarily related to the value of the contributions in those journals or to their usefulness to the scientist, but that there is a relation between the periodicals with the most articles abstracted and the periodicals most likely to be requested by the user who works through the abstracts.

Brown emphasizes the value of these lists for programs of cooperative acquisition and storage, and indeed they may have their greatest value for these purposes. The lists might well be studied by groups of libraries in close geographical proximity to help evaluate and to improve the adequacy of their composite collections. The author refers to the project of the Midwest Inter-Library Center, in which MILC will attempt to obtain all of the periodicals abstracted by *Chemical Abstracts* which are not held by member libraries. MILC is working out a similar program for the biological sciences. The lists in this volume are not complete enough for a large regional undertaking like MILC, which should be securing, not titles frequently cited, but rather those rarely cited.

The author has compiled a useful consolidated list of all of the journals cited in the eight fields. Almost 20 per cent of the journals listed by Brown appear on more than one list. Librarians need to consider the over-all values of periodical titles when deciding whether or not to purchase them. Of value to institutions building up back files are the summaries on comparative importance of earlier and more recent publications in each field. The university librarian planning branch libraries for the sciences can profit by data which show, for example, that approximately 12 per cent of the references in mathematics or in chemistry are to journals prior to 1924, while only 2½ per cent of physics references go back of 1924.

This volume is considerably more than a report on reference counts. Methods used by libraries for the selection of serials are summarized and evaluated. In this chapter and in another on the acquisition, storage, and discarding of scientific serials, the author has called on his years of experience in developing one of the country's best scientific collections at Iowa State College to interpret the

results of this study in terms of practical advice for those who are called on to supply research scientists with basic literature sources.

This volume is the first clothbound book in the Association of College and Reference Libraries monograph series. The ACRL has done well to put it into this form, and it is to be hoped that future substantial contributions can be given similar treatment.—*Melvin J. Voigt, University of California Library (Berkeley).*

Boston Public Library

Boston Public Library: A Centennial History. By Walter Muir Whitehill, Cambridge: Harvard University Press, 1956. 274p. \$4.75.

Institutions are necessarily what the ideals and acts of individuals make them; but not all institutions are fortunate enough to have a historian whose literary talent and lively interest in people are equal to the task of demonstrating the fact. The Boston Public Library, the first of the great American public libraries, has found such a historian in Dr. Walter Muir Whitehill, the capable director of another distinguished library, the Boston Athenaeum. From the earliest page, wherein he relates his own initial acquaintance with the library, to the final paragraphs of commendation of the current mayor for his support of the library's program, the volume abounds in human interest as the story of men's attempts, some wise, some foolish, some brave, some timid, to create a collection of books with the essential services to the public that, as George Ticknor, one of the library's founders, wrote in 1851, would "carry the taste for reading as deep as possible in society."

The vagaries of fate are apparent in both the first and the latest of the great benefactions: the first when Joshua Bates, the London banker, recalling his own experience as a poor boy in Boston, responded from across the sea with a promise of fifty thousand dollars when Ticknor sent out his noble printed proposal for a public library open to all; and the latest, when the library received in trust the million dollar gift of John Deferrari, whose amazing career from fruit peddler to millionaire was guided, unknown to the li-