

balance through its services in the national interest (*Ausgleichsbibliothek*), providing the facilities for exchange, information, cataloging, etc.). The second article, by Christian Voigt, tells the history of the State and University Library of Hamburg, from its humble beginnings in 1479 as a city council library (*Ratsbibliothek*) to the present; from town library to scholar's library, to public city library, to research library with a more general and carefully defined scope, accented by the founding of the University of Hamburg in 1919. The last part deals with the spectacular recovery and reconstruction of this important library which had suffered heavier losses during World War II than any other; it lost 600,000 volumes (only 120,000 were saved). Voigt's historical sketch is supplemented by an article by Erich Zimmermann on Hinrich Murmester and the founding of the library in 1479-1481.

Two important law libraries devoted to foreign and international law were founded in Germany soon after the first World War, one specializing in public and the other in private law. It is the latter which is the subject of H. P. des Coudres's article. Known as the library of the Max-Planck-Institute, it was evacuated from Berlin to Tübingen and Sigmaringen in 1943, and moved to Hamburg in 1956. Its coordination with other libraries in Hamburg, and its new building, are described in some detail.

Peter Karstedt contributes a somewhat theoretical article on the sociology of libraries in which he attempts an interpretation of the differences between university libraries, with their purpose of promoting the universality of learning, and the city research libraries, which by necessity develop along the same lines as the city or region which they serve. The next contribution, by Meyer-Abich, covers two questions: (1) what is library science, and (2) to what extent is a library a research institution? The author sees need for a concept of librarianship governed by scholarship rather than technology. Hermann Fuchs' article on the alphabetical catalog begins with a quotation from Pierce Butler which had amused many of us when we read it in 1953: "Nobody loves a cataloger. Catalogers are the pariahs, the untouchables, in the caste system of librarianship. Everyone seems to loathe or to pity them." That Germany too has its "crisis in

cataloging" is evident from this and the article following by Johannes Fock, who analyzes the pros and the cons of the classified and the alphabetical subject catalog. The authors of both these articles are well informed on American library literature.

This concludes the first part of the book. In the section on book history we find articles on Bible illustrations in early manuscripts, on the study of incunables and printing in Louvain, on music printing in fifteenth-century books, on a Koran printed in Hamburg in 1695, on a late sixteenth-century binding, and on a stock catalog of a large horticultural establishment of the eighteenth century. The third and final part deals with such literary figures as Quevedo, Kleist, de Toqueville, and Thomas Mann; it is of interest primarily to the student of Romance and Germanic literature.

In conclusion I should like to make the subjective observation that reading this volume was rewarding. In contrast to so many *Festschriften*, it contains a large number of well written, thoughtful, and carefully edited articles.—*Rudolf Hirsch, University of Pennsylvania Library.*

Classification and Indexing

Classification and Indexing in Science. 2d ed., enl. By B. C. Vickery, with an introduction by D. J. Foskett. New York: Academic Press, Inc., 1959. 235p. \$6.00.

Some years ago, a Cambridge don, noted both for his wit and narrowness of vision, remarked that "America is the place where all good fallacies go when they die, to be born again as the latest discoveries of the local professors." Our British cousins recognize that they borrow from us fashions in jazz and soft drinks, but they pride themselves on the fact that the intellectual movement across the Atlantic is from east to west.

However true this may be in general, it is certainly the case that the development of modern librarianship moved from west to east. The public library movement is distinctly an American creation, and so is the development of classification systems as a method of organizing book collections and providing reference and information service

to such collections. The Universal Decimal Classification is a lineal descendant of the Dewey decimal system, and many of the special classifications developed in England and elsewhere were stimulated by similar developments in this country around the turn of the century.

The contemporary developments in librarianship (in methods of storing and retrieving information which utilize ideas borrowed not from biology, but from mathematics and logic, and a concomitant emphasis on mechanized systems) are also American in origin. As part of this contemporary development there has grown up in this country a general awareness that classification systems have little utility beyond their function as a method of arranging books in open-shelf libraries for the use of the public and university undergraduates. We have recognized that close classification and universal classification systems as methods of organizing rapidly growing fields of information and collections of material are chimeras; but now these chimeras have migrated from west to east and have been reconstituted as the latest intellectual contributions of the Classification Research Group in England. Vickery's book can be considered a representative contribution of the Classification Research Group.

The book notes the existence of four systems of organizing information, which it calls alphabetical indexing, coordinate indexing, classification, and mechanical selection. It should be clear from the very statement that mechanical selection is not a form of organizing information on a par with the other three. As a matter of fact, the author himself recognizes that the other three can all be mechanized. Contrariwise, a system of mechanical selection can employ alphabetical indexing, coordinate indexing, or classification. Hence we will eliminate from what follows any concern with mechanical selection as a method of organizing information.

The first chapter of the book is concerned to establish a *need* for classification as contrasted with other forms of organizing information. It does this by purporting to show that all other forms employ classification devices; e.g., alphabetical indexing employs inverted headings and subordinate headings, and some forms of coordinate indexing divide their lists of terms into categories or classes. With reference to inversion and sub-

ordination in alphabetical indexing, this fact no more proves the basic nature of classification systems than the fact that classification systems list many sub-classes alphabetically or chronologically proves that alphabetization or chronological arrangement is basic to classification. The fact is there are no pure systems. The only real issue is not whether an alphabetical index does or does not employ inversions or subordinate headings but whether a total system of headings is organized into a systematic hierarchical array, rather than alphabetically. To go from the presence of inverted headings in alphabetical systems to the statement that total classification systems are thereby proven necessary is probably the longest *non sequitur* in library literature. Vickery's argument that coordinate systems must employ categories of terms is again utterly baseless and exhibits a curious lack of interest in the literature on the subject. After describing coordinate indexing as presented in Volume I of *Studies in Coordinate Indexing*, Vickery goes on to point out that Irma Wachtel recommended that terms in a coordinate system be arranged in categories, and he concludes his demonstration of the need for classification by again pointing out that Miss Wachtel's discussion of hierarchical relationships proves that a classification of knowledge is necessary for coordinate systems. As a matter of fact, the experimental work reported by Miss Wachtel led to just the opposite conclusion (*cf.* "Machines and Classification in the Organization of Information," *Studies in Coordinate Indexing, Vol. II, Chapter 1*).

After considering the "need" for classification, Vickery devotes a chapter to describing the construction of classification schedules. This crucial chapter, which is basic to the volume, defies comprehension, and even the author admits this fact. He sums up as follows: "The preceding discussion of problems in the construction of classification schedules may have left a somewhat confused picture of the final product."—and adds that the whole problem "demands further study." There is, however, one positive suggestion derivable from this chapter. Vickery apparently feels that all previous classification systems have failed because they attempted to classify literature in accordance with fields of knowledge. He suggests the following as an alternative: "The basis of the classification

suggested here is a long schedule of *substances* or 'things'—natural inorganic substances ranging from the subatomic particle to the galaxy, living organisms and communities, societies and institutions, material products and conceptual entities." Apparently, the author feels that we can divide things without overlapping, whereas we cannot divide scientific fields without overlapping. The whole rationale of this effort escapes me. My chair does not overlap my table, nor does my table overlap my chair, but a book about office furniture would discuss both tables and chairs, and it is the book about furniture which requires to be stored and retrieved, not tables or chairs.

The chapter on the construction of classification schedules is followed by a chapter on notation. In order to understand this chapter one must understand not only classes, but how categories differ from classes, how facets differ from classes and categories, and how phases differ from all three. One must also attempt to understand chains and arrays, as well as "flexional symbols." A man or a group has a right to use a special vocabulary, but the general lack of impact of Ranganathan's work on librarianship, outside of India, should have constituted a warning to the Classification Research Group. There ought to be some assurance that there is a pot of gold at the end of the rainbow before anyone is asked to attempt to walk on its diaphanous material. Since all the evidence points to the fact that universal classification systems are as dead as dodo birds, why should one devote a large part of one's mental effort to learning a special, highly technical vocabulary just to find this fact out?

Following the chapter on notation, there is a discussion of indexing. The burden of this chapter is that the development of chain indexing as an adjunct to faceted classification solves both the problem of multiple place classification systems and permutations of indexing terms. A chain index resembles what Bernier has called a correlative index. It avoids permutations of terms by prescribing a fixed order of subordinate terms in an index. Given a four-term heading, this reduces the number of entries from fifteen to four. The utility of such indexes and the possibility of prescribing fixed orders of subordination remain doubtful. As a matter of fact, Vickery suggests several orders and does not

recommend any one. As for a faceted classification, apparently what this means is a system which presents both inclusive and coordinate relationships among its classes. One might argue that if inversion or categorization establishes the primacy of classification, the use of facets establishes the primacy of coordination. As a matter of fact, the relation of inclusion is definable on the basis of the intersection of classes in the algebra of classes, that is to say, inclusion is a certain type of coordination or set intersection.

The next chapter on mechanical selection is, as remarked earlier, irrelevant to the major argument of the book, but again the progress of ideas from west to east can be noted by the time lapse. Vickery discusses the Chemical-Biological Coordination Center System as an example of an operating mechanical system, whereas the CBCC System has been closed down for approximately two years. He mentions the Peakes unit card system, which may or may not still be operating, and shows that he has completely failed to understand the COMAC System or its exemplification in the IBM Special Index Analyzer.

The final chapter deals with the possibility of a unified theory of information retrieval and notes that "one of the purposes of this book has been to stress this unity." To be in favor of a unified theory is like being against sin. To be more than a pious hope, the search for a unified theory must go beyond classification and categorization to a concern with the mathematics of types of order.

Underlying Vickery's position is a reliance on an outworn Aristotelian philosophy of substantial forms. Hence, his conclusion that the "primary category" is substance. Aristotle's view, like Vickery's, is basically biological; both depart from the deeper mathematical insight of Plato. Although modern science from the Renaissance followed Plato, Aristotle still reigned supreme in a subject-predicate logic based upon a substance-attribute philosophy. Beginning with Boole's work in the middle of the nineteenth century, the Aristotelian restrictions on logic were eliminated and the subject-predicate logic of syllogisms was recognized to be only a special branch of a wider mathematical logic.

The great development of mathematical logic took place after the main development of library classification. And it has only been

in recent years that the new mathematical logic has had any impact on librarianship; and now there is no going back. The Classification Research Group in England and this book of Vickery's do not contribute to nor advance towards a unified theory of information retrieval; rather, they represent an anti-scientific obscurantism which is defending tradition against scientific and logical advance.—*Mortimer Taube, Documentation, Inc.*

Music Librarianship

Music Librarianship, a Practical Guide. By Eric Thomas Bryant. London: James Clarke, 1959; New York: Hafner, 1959. 503p. \$6.50.

The first book on music librarianship to appear since McColvin and Reeves published their basic guide over twenty years ago should have been greeted with cries of joy. With the development of so many new music collections in libraries during that period, the time was certainly ripe for an up-to-date volume on the subject. This latest effort, however, should not deter aspiring authors who might have been considering a publication similar to this one.

Mr. Bryant is the borough librarian of Widnes, Lancashire, and according to his introductory remarks, the book "was written primarily for public librarians and their assistants, and from a British standpoint." The latter phrase was most timely and wise and should serve Mr. Bryant as some form of protection against the ire of American reviewers and readers.

His American sources, other than correspondence, included the *ALA Bulletin*, *Library Journal*, student theses from Kent State University and the University of Chicago, and the Public Library Inquiry volume on music which was written by Otto Luening. More detailed checking of data might have spared Mr. Bryant some future headaches as well as rid him of some of his headstrong ideas. The Harold Barlow of the Barlow and Morgenstern *Dictionaries of Musical Themes* is not an American conductor whose 78rpm recordings have ap-

peared in England, but *Howard Barlow* is. Also, a more careful proof-reading might have led to the discovery that Luening's first name of Otto is used correctly four times but appears once as Oscar.

The volume is divided into two parts. The first deals with administration, reference books and periodicals, cataloging, classification, gramophone record libraries, and an appendix containing a rather forlorn list of subject headings. Part two is given over to a graded list of instrumental and vocal music, miniature scores, and three supplementary sections, including an index to the works listed in this part, music publishers and their English agents, and instrumental tutors.

The sections on cataloging and classification are given in great detail and with copious examples. The classification systems outlined are Brown's Subject, the Cutter Expansive, the Dewey Decimal, the Library of Congress, Bliss' Bibliographic, and the British Catalogue of Music. The author states that all of these sections have been checked by experts, including Bliss who, before his death, read the first two drafts of the discussion of his system. Bryant also points out that any opinions expressed are his own. A helpful chart at the end of the chapter shows clearly how fifteen scores and books would be classed in each of the systems.

Mr. Bryant does doff his hat slightly several times to American librarianship for its cataloging codes, its many publications in books and journals on the various facets of organizing and maintaining music collections, and he also deplores the lack of people in Britain to make up an organization such as the American Music Library Association. I expect that he will receive some replies to his statement that "the American record user is apparently tending to become more interested in the actual work recorded and to pay less attention to the particular artist; the assumption is growing that any orchestra, soloist, etc., that is good enough to achieve a contract with a gramophone record manufacturer must be competent." In the light of such a bold and also erroneous statement I wonder how Mr. Bryant would explain the works currently available that have twenty or more different recorded performances, and why the American record reviewers consistently point out the differences between A's performance as contrasted with B's and why