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From Cutter to Computer: Technical Services in Academic and Research Libraries, 1876-1976

TO GAIN AN IMPRESSION of the technical services in academic libraries in 1876, one can do so no more pleasantly than by reading "A Librarian's Work," an article written by John Fiske, assistant librarian of Harvard, which appeared in the October 1876 issue of the *Atlantic Monthly*. It's a longish essay. It takes the reader through the complete processing of a book "from the time of its delivery by the express-man to the time when it is ready for public use," pausing to discuss the whys of procedures followed and records produced in the Harvard University Library, then, as now, the largest academic library in the country.¹

Today's librarian may be struck by the intimate involvement of Fiske in the details of processing, but anyone who has worked in a very small library will recognize the pattern. Indeed, it illustrates the point that the technical services carry their histories with them, as heads of small libraries continue today to do the things which the heads of the larger ones did back in 1876. The isolation of the technical services in a separate division is a function of size more than a change in attitude toward the services—first a separate unit is established to handle cataloging, then one

for acquisitions, later serials, and finally all of them together as a separate division with its specialist head. The review that follows, then, consists of a look at the vanguard of growing libraries as size forced changes in practices and in organizational structure. Academic and research libraries have tended to dominate change and codification in this area of library work, as much in 1876 as in 1976.

Library heads in 1876 were not only involved in the operations of technical services; they were shaping the tools of cataloging and guiding decisions related to the technical services at a time when decisions were being made which still guide us today. It was as well, then, that they knew so precisely the functions which they were shaping. The importance of generally accepted codes for the cataloging of books was readily apparent to the 1876 leaders who met in Philadelphia, and the importance which they attached to cataloging is repeatedly made clear. Utley, in writing of the 1853 conference of librarians, states that there is little doubt that Jewett's explanation of his proposal to make a general catalog through the use of stereotype plates, a catalog which could be adapted for the use of other libraries,

was of first importance for those attending.²

When, during the 1876 conference, Lloyd Smith insisted that Melvil Dewey explain the system of cataloging and classification which he had developed at Amherst, Smith noted that the one idea of special value which he had carried away from the 1853 convention had been that of Mr. Folsom's card catalog and that he felt the most valuable idea which he might carry away from the present conference would be that of the Dewey system.³ A library committee, reporting in the mid 1940s, justifies the concern of the 1876 library leaders with the details of processing, as follows:

The organizing of books for use through cataloging and classification has perhaps received more thought and attention from librarians throughout the years since 1876 than any other phase of library work. This is as it should be because good cataloging and classification are at the root of all efficient librarianship. It is here, too, more than in any other portion of library work, that we are restrained and in varying degree held to conformance with decisions, policies and routines long since made and sometimes seriously outmoded.⁴

Two new publications of prime and lasting importance were available in 1876 and were discussed by those attending. They were Dewey's *A Classification and Subject Index for Cataloguing and Arranging the Books and Pamphlets of a Library*,⁵ which was the foundation of the Dewey Decimal Classification, and the "Rules for a Printed Dictionary Catalogue," by Charles Cutter, librarian of the Boston Athenaeum.⁶

Of the latter, Paul Dunkin has written that "A wide-ranging, creative, open mind is at work on every page of Cutter's *Rules*. Above all, a modern mind. Cutter did not anticipate our jargon, but he did anticipate many of the problems we describe with that jargon. Prob-

ably his is the only book of rules for cataloging which is fascinating reading."⁷ The "Rules" were not invented by Cutter; they were, rather, a drawing together of his study and observations of the experiences of other libraries and of his own in producing the Boston Athenaeum catalog, a monumental compilation of catalog records made according to the high standards acceptable to Cutter.

Cutter's name appears frequently in the records of library activities during the quarter of a century before his death in 1903, as a voice from the conference floor, as a productive committee member, and as a writer on library concerns. His counsels were sensible and showed careful analysis of library problems. In contrast to the aggressive Dewey, Cutter seems a quieter, but equally productive, librarian, the respected colleague who worked unselfishly for the good of the profession. The name of Cutter, like that of Dewey, must appear frequently in a history of library technical services, for they are its first significant codifiers and among its liveliest intelligences.

Cataloging, which required so large a portion of the librarian's time, was the first function to draw away from the chief librarian's direct participation. Fiske mentions that of twenty assistants, seventeen were occupied chiefly with cataloging,⁸ but that was Harvard, of course. Other academic libraries were growing more slowly. George Little's paper prepared for the international library conference held in Chicago in 1893 (generally referred to as the World's Library Congress) included the information that:

Of 450 institutions of higher learning in the United States only 200 have collections of books large enough to be ranked as college libraries. Of these 200 only a third have professional librarians. Of this third a smaller fraction are well endowed and organized.⁹

ALA's survey of libraries in the U.S. during the mid-1920s revealed that among thirty-three college and university libraries of more than 100,000 volumes, thirty-one had a cataloging department, and six had a classification department in addition.¹⁰

In their 1936 *Principles of College Library Administration*, Randall and Goodrich assumed order and catalog departments in a large library and in smaller libraries at least one librarian beyond the head to be primarily concerned with book acquisition and preparations.¹¹ In the university libraries by this date, order and catalog departments were taken for granted.

EMERGENCE OF THE TECHNICAL SERVICES UNIT

The technical services are as old as libraries; the technical service unit is a development of the past forty years. Donald Coney, presenting a paper to the University of Chicago library institute in 1938, is credited with the first published examination of the unit organization of the technical processes, as he labeled them.¹² And, indeed, his references to other works do not reveal any prior discussion, as he leans on business and government for his authorities. Coney discussed briefly the alternatives of divisional versus departmental administration for the acquisition and processing functions, the decision whether to interpose a divisional head between the chief librarian and the department heads and singled out size of the operation as the most important consideration, a judgment which has not been revised.¹³

By 1947 the technical service division was sufficiently accepted to be attacked by Raynard Swank in a presentation before the Cataloging and Classification Division during the ALA San Francisco Conference.¹⁴ For the 1948 Atlantic City Conference, the division sponsored a symposium on "The Technical Ser-

vices Division in Libraries."¹⁵ Cohen's introduction to the symposium cited some incomplete evidence to show a trend toward such a division,¹⁶ but each of the five speakers tended to report experience in a single library, speaking mostly of recent developments. That librarians understood the difficulty of realizing the full value of the change is evidenced by Margaret Brown's observation, "The success of the reorganizational plan . . . depends, to a considerable extent, on the cooperation and understanding of every member of the staff. It is the habits and thinking of the staff that require reorganization as much as any procedural details. It is our habits and thinking, of course, that are the more difficult to reorganize."¹⁷ Logsdon's summary of the presentations noted that the new units ranged from "mere holding companies bringing related departments under a single administrator primarily for the purpose of reducing the span of control of the chief librarian" to "organizational units striving toward completely integrated divisions." He favored the latter one.¹⁸

Edwin Colburn argued "The Value to the Modern Library of a Technical Services Department" in the January 1950 issue of *College & Research Libraries*, and in 1952 Arthur McAnally reported the wide acceptance of the technical services divisional plan in large academic libraries.¹⁹ In 1954 Tauber brought out the first textbook devoted exclusively to the technical services,²⁰ and in 1956, in an admirable exhibition of wisdom, the acquisition and catalog librarians voted to join in a single Resources and Technical Services Division to represent their interests in the reorganized ALA. The new division promptly replaced the earlier *Serial Slants* and the *Journal of Cataloging and Classification* with *Library Resources & Technical Services*, its first issue dated winter 1957.²¹ The voters seem to have convinced even *Library Litera-*

ture, which had continued to use "Technical processes" as its heading until the 1958-60 cumulation when it accepted the inevitable with "Technical processes, See Technical services."

How different the symposium presented during the 1961 Cleveland Conference was from that in 1949! A short dozen years later the topics were "A Brief History of the Technical Services in Libraries" and "The Present State and Future Development of Technical Services," followed by two papers on the teaching of the technical services.²²

For approximately the first two decades of the divisional structure of technical services, the only serious suggestion for a different alignment of functions was made, as noted above, by Swank. His 1944 article, "Subject Catalogs, Classifications, or Bibliographies?" showed his serious consideration of an old controversy.²³ His paper recounted "the important critical discussions from 1876 to 1942 in which subject cataloging and classification, as contrasted with bibliography, were challenged and defended," and it summarized the principal arguments on both sides of the question.²⁴ Swank's presentation during the San Francisco Conference²⁵ separated the professional and clerical aspects of acquisitions and cataloging and laid the basis for recommending that cataloging and bibliography would be the natural partners in a unit. While agreeing strongly with the weaknesses of subject analysis as provided in libraries and its crippling cost, librarians did not take up the suggestion. But Swank's thesis was not dead. It was to reappear under very different auspices.

Academic libraries began to use surveys in the late 1930s, seeking to improve their operations and services. Erickson identifies the 1938 survey at the University of Georgia Library as the first one cited in *Library Literature* which was made by outside experts.²⁶ Shaw, in his editor's introduction to the

January 1954 *Library Trends* issue on "Scientific Management in Libraries," reported "a trend toward the application of scientific management to libraries—and indeed a rapid one. Such an issue [i.e., of *Library Trends*] would have been quite impossible twenty years ago."²⁷ These trends influenced the technical services. In 1952 the Committee on Administration of the ALA Division of Cataloging and Classification began a study of technical services practices in large American libraries, resulting in the Shachtman report.²⁸ A follow-up study was instituted by the ALA Resources and Technical Services Division in 1964, resulting in the 1967 Dougherty report.²⁹

The Association of Research Libraries has been responsible for underlining and strengthening the interest of academic librarians in management consciousness. Its Office of University Library Management Studies, established in 1970, joined with Booz, Allen & Hamilton in a detailed investigation of the organization and staffing of the libraries of Columbia University during 1970-71.³⁰ (Are you listening, Professor Swank?) The result was a study which analyzed the basic elements of university library service. Among the five major organizational units which it recommended were a resources group (responsible for collection development, in-depth reference service, and original cataloging) and a support group (responsible for acquisitions, all cataloging activities except original cataloging, photographic services, and fiscal and security control).³¹ The Columbia Libraries published a detailed description of its new organization growing out of the report, including a resources group and a technical support group.³² To other academic libraries it represents a significant experiment in progress.

John Dawson, the historian of the technical services for the 1961 symposium, reported that the announcement of

the program had brought an inquiry to the program chairperson as to what were to be considered the technical services in libraries.³³ The answer to that question was and still is that the specific library or situation dictates the answer, and that's a convenient way to leave it. Randall tried for an answer based on analysis and logic by considering "the things which are done in libraries in the attempt to give service to patrons by means of books."³⁴ His efforts did not have too much influence on the practical situation within the library. Acquisitions and cataloging certainly belong, and serials when it is created as a separate unit. Binding tends to join, since one of its largest responsibilities is to bind the periodical volumes which the serials unit has acquired, and catalog records are involved. Tauber's inclusion of circulation in *Technical Services in Libraries* did not result in drawing the function under the technical services umbrella. Other activities which are sometimes placed in the division—photographic services, internal mail deliveries, control of book funds, circulation of current periodical issues, and automation—seem to be there only because they lack a place elsewhere and, in a larger library, would more properly be gathered together in an administrative services unit. Collection development, once it ceased to be selection, has floated cheerfully between the technical and reader services, sometimes attaining the dignity of an independent unit of its own. For the purposes of this paper, we shall discuss acquisitions, cataloging, serials, and binding.

ACQUISITIONS

The acquisition operation has always been less tied to the past than cataloging. Once the title is acquired, how it was acquired is of minimal significance. Tracing the acquisition function through the records of the past hundred years shows a gradual withdrawal of the head

librarian from the acquisition operation, a simplification of records kept to control the procedures, and a broadening of the kinds of materials acquired and their sources.

Book ordering is thoroughly treated in Fiske's "A Librarian's Work," in the early volumes of the *Library Journal*, and in the U.S. Bureau of Education's 1876 special report, *Public Libraries in the United States of America*, hereafter referred to as the 1876 Report. Changes made by the turn of the century and shortly thereafter were recorded in the 1896 World's Library Congress papers; C. W. Andrews' 1903 article, "The Acquisition of Books"; a 1906 symposium on "Methods of Book Buying"; "Some Notes on the Principles and Practice of Bookbuying for Libraries," a lecture delivered by Isabel Ely Lord before the New York State Library School in 1906; and in the various reports of the ALA Committee on Bookbuying and on Relations with the Book Trade, which were faithfully reported in the *Library Journal*.³⁵⁻³⁸ In 1930 the first textbook on acquisitions appeared, Drury's *Order Work for Libraries*, followed at a great distance by Wulfekoetter's *Acquisition Work* in 1961, and Stephen Ford's *The Acquisition of Library Materials* in 1973. These texts, supplemented by chapters in Tauber's *Technical Services in Libraries* (1954) and such general texts on college and university libraries as Randall and Goodrich's *Principles of College Library Administration* (1936), Wilson and Tauber's *The University Library* (1945), the several editions of Lyle's *The Administration of the College Library* (latest, 1974), and Rogers and Weber's *University Library Administration* (1971), permit the reader to follow changes in the accepted acquisition practices of the past century.

The early writings show the head librarian very much in the midst of the order operations. Reporting to the World's Library Congress in 1893, Jones

expressed the opinion that "buying should be in the hands of one person, preferably the librarian."³⁹ Lord (1907) underlined the importance of the head librarian's knowledge of the sources of books, since "a certain amount of his time and energy must be devoted to this question."⁴⁰ In a small library, Drury (1930) assigned the searching of orders to the librarian.⁴¹ Randall and Goodrich (1936) retained only the bill handling in the college librarian's hands, leaving the rest of the order work to assistants.⁴² Lyle (1974) summed up practice for the college library today as follows:

In the small college library the librarian will handle acquisitions work in addition to his administrative and book selection duties. In the medium-sized college library he may have an acquisitions librarian or at least a clerical assistant to help him. In the large college library there will probably be an acquisitions department, headed by a librarian, and several clerical assistants in addition to part-time student help.⁴³

In the generally larger university libraries, this work had already been delegated. Peterson reported of the University of California Library at Berkeley that: "Before 1900, when the library staff numbered only a few persons and there was no formal organization into departments, the work of acquisition was carried on mainly by Librarian Rowell himself. An Order Department was established . . . in November 1902."⁴⁴

Obviously, the librarian's commitment to acquisitions is a function of size. Before 1900, the generally small collections and smaller annual book budgets made a part-time commitment to acquisitions a reasonable assignment. The involvement no doubt had some benefits for the library and its users, providing a closely coordinated total service.

This early involvement seems to have been more concerned with tight control than with saving staff time. In an appendix to his 1876 *Rules*, Cutter listed eight catalogs, in card, sheet, or book form, which were needed for acquisition and control of the library's collection in addition to the public catalog. These included catalogs of accessions, books missing, duplicates to be sold, and duplicates sold or exchanged. He judged his system to be economical, pointing out that it could answer such questions as:

Has this book been proposed to the Book Committee? Has it been approved? Ordered? When? From whom? Who is responsible for the error if it turns out a duplicate? When was it received? Where is it entered in the Accessions-catalogue (that we may ascertain its price and condition)? Where was it first located?⁴⁵

During the 1906 symposium on "Methods of Book Buying," one participant questioned the use of the head librarian's time in "studying bargain lists and hunting auction sales," when that time has so many service demands on it.⁴⁶ However, Lord (1907) suggested keeping files for five categories of desiderata and described "the most perfect system" for keeping a record of books on order, one which involved filing in the official catalog records of books wanted, whether they were to be actively sought or only accepted as gifts.⁴⁷

College and University Library Problems (1927), the report of a study made by George Works for the Association of American Universities, discussed the touchy matter of speed versus economy in book acquisition.⁴⁸ In 1946, the ALA/ACRL College and University Postwar Planning Committee recorded its suspicion that the procedures and routines of bookbuying could be simplified and recommended that every library reexamine its order routines.⁴⁹ The age of recognition that good management is

essential had arrived. Today's acquisition librarian takes the risk that Cutter's questions cannot be answered.

Ordering Procedures

Sheet orders were the rule of the day in 1876. Poole, writing for the 1876 *Report*, stated as a matter of course, "Separate lists must be prepared of the American and foreign orders; and each, for convenience of consultation, should be arranged in alphabetical order under the names of authors."⁵⁰ Lord's advice in 1907 on this matter sounds a bit quaint to today's ears:

It may not be amiss to say that it is courteous and wise to consult the dealer as to the form in which he prefers orders. Not all dealers have the same methods, and if the library conforms to that of a particular dealer, the result is better service, as well as a pleasant relation.⁵¹

Drury (1930) assumed an order sheet as did Randall and Goodrich (1936), and Wilson and Tauber (1945) prescribed the order letter for university libraries!⁵²⁻⁵⁴

Multiple order forms are first mentioned as library forms in a 1933 article by Nelson McCombs, who reports a continuous strip of intercarboned forms developed by the New York University Library and adopted by Yale and the University of Rochester.⁵⁵ Their spread was slow, but with the growing interest in scientific management following World War II they became more common. Library supply houses began to offer them as standard forms useful in the small operation, and large libraries found it cost effective to design multi-function fanfolds. The next and ongoing revolution in order forms began with the application of computers to the repetitive tasks of the order unit. Interestingly, it can combine multiple and list forms in its swift sophistication.

The complexity and consequent cost

of the preorder search of titles recommended for acquisition is in direct ratio to the size of the library collection. For that reason it was little dealt with in the early days. Cutter (1876) described searching but made no mention of verification—the completing of the bibliographic information—and probably took it for granted.⁵⁶ Twenty years later, Jones specified that in the Harvard procedures, "an assistant verifies and completes details of title, edition, publishers, etc., and sees if the book is already in the library or ordered."⁵⁷ By 1930 Drury's textbook devoted three pages to preorder searching and two to verification, noting that the work is usually done in a large library by an assistant, in a small library by the librarian.⁵⁸ Randall and Goodrich agree with Drury,⁵⁹ emphasizing that "even with a fair-sized staff, the librarian will have to do much of the important work of checking book orders with the library's catalog to avoid duplication."⁶⁰ Wulfekoetter (1961) expanded the directions for bibliographic searching by discussing various categories of titles to be acquired and introduced a new element by suggesting that the searching be used as preliminary cataloging.⁶¹ Ford (1973) emphasized the importance of coordinating work among the technical service units so that it is not repeated,⁶² but it is clear from his discussion of precataloging that this reasonable dictum is by no means universally accepted.⁶³

Auctions

Perhaps the most startling aspect of early sources for acquiring books was the regular reliance on auctions. Poole, writing in the 1876 *Report* of the acquisition of out-of-print books, warned of high prices charged by secondhand dealers and recommends the use of the book auction with suitable detail:

These books are constantly appearing in the auction sales in New York and other cities. The auctioneers will send

their sale catalogues to any library which makes the request for them in season to send orders. There are responsible men who make it a business in the large cities to attend these sales and buy books, charging a commission of five per cent on the amount of the purchases, and giving the library the benefit of their experience as to prices, editions, condition of copies, etc. The books bought will be billed and shipped by the auctioneer direct to the library. As auction sales are for cash, it is necessary that prompt remittance should be made. There are a few auctioneers of such established reputation for integrity that it is safe to send orders direct to them, and they will bid honestly and charge no commissions; but as a rule, it is better to employ an agent, limiting the bids in some instances, and in others authorizing him to use his discretion. An application to any experienced librarian will give the needful information as to responsible agents in New York and elsewhere.⁶⁴

Poole's distrust of secondhand dealers of the day was shared. Jones, writing in 1896, stated, "A leading New York secondhand bookseller used to say that the secret of cataloging is to enter the same book in half a dozen different places in the same catalog in such a manner that the reader shall never discover it."⁶⁵ Jones put auction buying into perspective in terms of use. He reported a survey of 155 libraries, in which it was found that only a third used auctions, while two-thirds ordered from the offerings of secondhand dealers.⁶⁶

References to auction buying as an accepted source persisted in the literature. Lord (1907) recommended auctions as a source for expensive illustrated and art books, advising that "it is not worth while to spend much time on auction catalogs for books published at a low price."⁶⁷ Drury (1930) described auction buying in his textbook, but explained that "catalogs from auction

houses no longer offer the bargains of years gone by, for it does not pay the seller to list the cheaper books."⁶⁸ Wulfekoetter and Ford treated auction buying as a minor part of acquisitions, and their explanations show the situation has not changed much since 1930.^{69, 70}

Use of Booksellers

Libraries generally bought domestic books through booksellers rather than from publishers in 1876, and this practice has persisted. The ALA Co-operation Committee referred in its 1877 report to frequent inquiries as to whether the committee would be willing to obtain books for libraries as part of its duties. The committee's response was a firm referral to the bookseller.⁷¹ Whitmore (1906) recommended the use of a single firm, explaining that there would be little variation in prices among booksellers, the possibility of confusion in orders was reduced, there was a saving in carriage charges, and the dealer would develop a useful knowledge of the library's needs.⁷² Lord (1907) affirmed the judgment, pointing out that:

There is no advantage whatever in ordering direct from the publisher, unless one needs a special book at once that one is sure of getting quicker that way. For net books, the same discount is given by a local dealer, and perhaps in ordering from the publisher the cost of transportation must be added. The scattering of bills is also a great waste of time and temper. It may be safely said that nobody orders direct from the different publishers in these days.⁷³

Drury (1930) confirmed the practice of using publishers only under special circumstances and pointed out the pros and cons of using the local dealer versus the metropolitan jobber, strongly recommending the latter as able to give the best service and discounts.⁷⁴ As befits the first textbook on order work, Drury em-

phasized formal agreements with agents relating to all aspects of the transactions.⁷⁵ Wulfekoetter's much longer treatment of agent selection⁷⁶ confirmed the greater range of materials and sources which had gradually become available to librarians since Drury wrote, a range confirmed by Ford.

The amount of the American booksellers' discount to library customers was the burning issue of the early years, the copyright issue of the day, driving apart librarians and booksellers, natural allies in the provision of books to people. During a summer convention at Put-in-Bay in 1874, the booksellers entered into an agreement by which the discount to libraries was cut back to 20 percent.⁷⁷ Lord brought together the history of the next three decades, beginning with the 1876 conference, which passed Poole's resolution:

Resolved. That the discrimination against libraries in the rules of the American Booksellers' Association, which forbids the trade from supplying libraries with books at a greater discount than twenty per cent, is unjust and impolitic, and is a rule which no librarian is bound to respect.⁷⁸

A committee appointed to deal with the publishers reported the following year that the 20 percent agreement had broken down, and free enterprise reigned until 1901.

In 1901 the newly organized American Publishers' Association and American Booksellers' Association adopted the "net price rule," which fixed discounts to libraries at 10 percent for each book during the first year after publication, after which discounts could be negotiated. The ALA Committee on Relations of Libraries to the Booktrade was established in 1901, its name changed to Committee on Bookbuying in 1904. This first ALA committee on relations with the booktrade was unable to change the net price rule, but it did

publish a series of bulletins helpful to librarians on the practical aspects of bookbuying. The net price rule was finally settled in 1907, when the American Publishers' Association repealed all existing rules on book prices as the result of judicial decisions against combinations in restraint of trade.⁷⁹

For the next several years the ALA committee worked to better relations with the booktrade, duly reporting its lack of spectacular results at the annual conferences. Today's RTSD Bookdealer-Library Relations Committee, established in its present form in 1961, and the Association of American Publishers/RTSD Joint Committee, approved by the ALA Council in 1966, have the same amiable purpose.

Acquisitions from Abroad

Advice throughout the century has referred the small library to import booksellers for the acquisition of foreign imprints, but even in 1876 the large libraries found it useful to establish relations with agencies in foreign countries. Poole (1876) advised:

As a rule, it is best to make all purchases of English books in London, and of French and German books in those countries, because better editions can there be procured, and at cheaper rates, than in this country. The binding, also, can be done in a better and more durable style abroad than in this country, and at half the cost. By the revenue laws of the United States, books for public libraries can be imported duty free.⁸⁰

A short history of this country's progress toward duty-free books for libraries is included in the 1876 *Report* and indicates the complications which clearance through customs can offer.⁸¹ Poole's precise reasons for shopping in Europe no longer hold, but large libraries have continued to find direct buying from the country of publication both faster and less expensive.

Collating and Accessioning

Receipt procedures have changed remarkably during the past century in relation to collating and accessioning. Both were generally accepted parts of the receipt procedure in 1876. Poole notes that new books must be collated to ascertain if they be complete copies and that no signatures be missing or transposed. . . .

The books must then be entered in the "accession catalogue," which is usually a folio volume with printed headings and ruled especially for the purpose. This record furnishes a perpetual history of every book that comes into the library, and gives the date, accession number, author, title, place where published, date when published, number of volumes, size, number of pages, binding, of whom procured, and cost.⁸²

Fiske, speaking to the layman in his *Atlantic Monthly* article, explains the library sense of "collate," describing a pretty thorough examination:

To collate a book is simply to examine it carefully from beginning to end, to see whether every page is in its proper place and properly numbered, whether any maps or plates are missing or misplaced, whether the book is correctly lettered, or whether any leaves are so badly torn or defaced as to need replacing.⁸³

He volunteered the information that English books rarely have serious defects, while in French and German books "the grossest blunders are only too common."⁸⁴ Collation was discussed during the sixth session of the 1876 conference, and those who spoke to the matter showed that some daring exceptions were being made to the full collation advised. Some were already following the practice common later, that of collating only expensive books, the definition of "expensive" increasing with the years.⁸⁵

The accession book gave way slowly. In 1878 Harvard librarian Justin Winsor, representing the large library, advocated the shelflist for use as the accession record.⁸⁶ A 1908 survey by the ALA Committee on Library Administration showed that the accession book was not used by the leading libraries, but that of 183 libraries of varying sizes, 162 kept an accession book, while twenty-one used other methods of accessioning.⁸⁷ ALA's *Survey of Libraries in the United States* (1927) discovered a trend away from the accession book to a less expensive substitute, with more use in smaller libraries than in larger.⁸⁸ The *Library Journal* made a survey of accession and inventory practices in 1959, sending a questionnaire to 1,102 libraries of various kinds. The survey showed that most academic libraries had abandoned the accession book and kept such information only on the shelflist card or some other readily available record maintained for other purposes.⁸⁹ At the present time probably no fair-sized academic library still maintains the accession book.

Gifts

Today's demanding user of academic libraries is struck by the smallness of the library collections in 1876 and, perhaps worse, the fact that the great majority of the titles in the collections were obtained as gifts. Said the editors of the 1876 *Report*, "Few colleges have possessed funds to build up libraries on a scientific plan. Their collections consist largely of the voluntary gifts of many individuals, and hence are usually of a miscellaneous character."⁹⁰

Jones (1896) reported that some libraries included want lists in their annual reports and thus attracted needed gifts.⁹¹ He pointed out that:

It is not necessary that all gifts be added to the library, and they should be received with the understanding that

they may be sold or exchanged if duplicates or unsuitable. It costs money to catalog and store books, and those outside the library's field should be rigidly excluded. . . . It is undesirable that gifts of miscellaneous books should be shelved by themselves. They should be distributed through the library with their respective subjects.⁹² Andrews (1903) specified the keeping of a list of books which would not be bought, but would be accepted as gifts, but expressed concern about accepting gift collections with restrictions which would seriously affect their value to the users.⁹³ It was his suggestion that the librarian requesting a gift never use a printed form or send a typewritten letter, but always send an autograph letter!⁹⁴

Wyer's manual (1929) on *The College and University Library* sounded a contemporary note in this area. He urged that only those gift items be kept which "accord with a carefully worked out plan of the library's scope," and applauded those libraries with enough fortitude to decline gifts offered with "conditions attached which involve inordinate labor and cost for maintenance or administration. . . . There is a considerable class of material," he concluded, "that can be bought for less than it would cost in time, trouble, postage and follow-ups to get it free."⁹⁵ Drury (1930)⁹⁶ and the later writers on gifts agreed with Wyer, with a strengthening of the more independent attitude toward gifts.

Exchanges

Predictably, the exchange of duplicates among libraries, an effort to invest staff time to acquire books without financial outlay, was a topic of interest in 1876, and concern about practical ways of exchanging duplicates appeared frequently in the literature thereafter. The best use of duplicates was a topic discussed on the floor during the Philadelphia Conference. Ever the innova-

tor, Dewey suggested then that "the best method, if it were practicable, would be to turn all duplicates into a common depository, and then contributors could draw from that source, the manager of the depository giving credit for all books sent in, and charging all drawn out."⁹⁷

In 1896, Adolf Hepner, editor of the *St. Louis Tageblatt*, sent an open letter to ALA advocating the establishment of an American libraries' clearinghouse to be administered by the U.S. Commissioner of Education and to be the center for distribution to American libraries of "such books and pamphlets as are put free of charge at its disposal." Hepner envisioned the stock of the clearinghouse as coming from items published by their authors and left on their hands.⁹⁸ Jones discussed the problem and the clearinghouse proposal but came to the conclusion that it could not be self-supporting and that "the State or National Government has hardly reached the point of undertaking this work at the expense of the taxpayers."⁹⁹

In 1937 the H. W. Wilson Company offered to serve as a clearinghouse designed to aid libraries in completing their fragmentary serial sets. The service operated at a loss and was withdrawn after a few months. More successful, perhaps because it was and is operated by those concerned, has been the Duplicates Exchange Union. It was formed in 1940 as a periodicals duplicate exchange, broadening its scope in 1944 to include other duplicates. The union is still active under the sponsorship of the ALA Serials Section, its membership composed of small libraries.¹⁰⁰

The old wish for a common depository to facilitate exchanges among libraries has come closest to realization with the United States Book Exchange, recently renamed the Universal Serials

and Book Exchange. It succeeded the American Book Center for War-Devastated Libraries, organized to send publications to Europe at the end of World War II. The exchange was organized in 1948, supported by a Rockefeller Foundation grant, fees paid by participating libraries for materials obtained, and contracts with the State Department for services performed for foreign libraries. As it has had to raise fees for handling materials and as federal support for foreign libraries has ceased, the exchange has reviewed its services and sought other functions which it could fulfill.

The exchange of an institution's own publications for those of another was a well-established activity at the time of the 1876 conference. The 1876 *Report* includes an article by Theodore Gill on "The Smithsonian System of Exchanges,"¹⁰¹ explaining its services as a medium of exchange between institutions here and in Europe. The first packages had been sent abroad in 1851, and by 1876 the institution was maintaining an impressive operation and has continued to handle shipments from government agencies and private institutions which go to exchange bureaus in other countries for distribution. New support for international exchanges came with the establishment of Unesco and the decision taken by its first general conference in 1947 to be the main center for promoting direct exchanges between institutions throughout the world. It has done just this, for academic libraries as well as others, by means of its *Handbook on the International Exchange of Publications*, first published in 1950, and through information appearing in its monthly *Unesco Bulletin for Libraries*.

Direct exchanges among libraries in this country have prospered as libraries and their institutions have published series suitable for exchange. Methods of establishing them and records which

should be kept to control them have been regular parts of textbooks on acquisitions, and Erickson's study of college and university library surveys made during 1938-52 reported as the "most frequently mentioned among these recommendations [for the development of gift and exchange programs] was the need for maximum utilization of the University's publications in the development of such a program."¹⁰² Not many years after this study these programs began to suffer with the reduction in number of titles published by universities and the number made freely available for exchange purposes.

CATALOGING

In the years before 1876, individuality in cataloging had been a regrettable necessity. As Holley points out in his essay on the events leading up to the 1876 conference, the librarians attending it "wanted many topics discussed, but they especially wanted to know what to do about cataloging and classification. . . . Classification was far from narrowing down to two basic schemes nor was there anything like agreement on cataloging rules."¹⁰³ That general agreement was needed was clearly recognized. As James G. Barnwell of the Philadelphia Mercantile Library put it to the conference on the opening day, "I think it is of the first importance . . . that a code of rules be formed by a conference of bibliographers, and then adhered to with the most slavish servility; for entire uniformity, next to accuracy of description, is the most essential element of a useful catalogue."¹⁰⁴

The 1876 *Report* formed a solid background to the proceedings. During the morning session on October 5, Secretary Dewey announced that Warren, one of the two editors of the *Report*,

had arrived from Washington, after travelling all night, in order to supply copies of the Government Report on libraries for the use of the Conference. Copies were at the table and could be

used in the room. The enthusiasm with which this announcement was received showed how well the Conference appreciated the great service done the libraries of the country by this publication of the Bureau of Education, and for a short time prevented the transaction of further business.¹⁰⁵

Many of the contributors to the *Report* were in attendance at the conference, including Otis H. Robinson, author of "College Library Administration." Writing of classification, he stated bluntly, "There are objections to all plans," and warned against changing plans too lightly. "A slightly imperfect plan strictly followed is far better than two plans at once."¹⁰⁶ There were two chapters of the *Report* dealing solely with cataloging, "Library Catalogues," by Charles Cutter, and a four-part "Catalogues and Cataloguing."^{107, 108} Part I of the latter presented "A Decimal Classification and Subject Index," Melvil Dewey's twenty-six-page explanation of the plan which he had developed in the Amherst College library during the previous three years, conceived by him in 1873 while he was yet an undergraduate library assistant of twenty-one.¹⁰⁹

Cutter's thorough report on "Library Catalogues," covering nearly a hundred pages, drew the following appraisal from one of his contemporaries:

Mr. Cutter has an elaborate and exhaustive article that would seem to cover every point that could arise. . . . He defines the conflicting systems, shows their merits and demerits, and points out the circumstances under which one is preferable to another. The tables are a monument of painstaking elaboration, furnishing not only a complete classification of the different catalogue systems, but also their comparative usefulness and general adoption, the cost of printing, the necessity of printing (rather than their use in MS.), with an additional tabulation of the printed catalogues of public libraries in the United States (and their data), to the number of one



Boston Athenaeum

Charles A. Cutter

thousand and ten. Of these twelve tables four are the compiled answers to circulars sent out by Mr. Cutter in 1875 to seventy-five libraries that had lately printed catalogues. The minuteness and thoroughness distinguishing all of Mr. Cutter's work has never had better illustration.¹¹⁰

Cutter's article showed his commitment to the problem of the catalog and illustrated the solid foundation on which he based his writing of the "Rules for a Printed Dictionary Catalogue." Dunkin said of the latter, "Cataloging in the United States derives from Cutter. A study of the theory and principles of American cataloging is largely a study of the theory and principles of Cutter and what we have done with them."¹¹¹

In the years following the notable contributions of Dewey and Cutter to cataloging, as tools and standards were developed, it was largely the academic and research librarians who furnished the interest, suggestions, and experimentation; and thus it was that academic and research libraries largely took over

control of cataloging in this country and have held it since.

The nature of cataloging is such that once done, it is expensive to change. So decisions made during the past century have been important to libraries, as they have been lasting constraints to change. The distribution of LC catalog cards, begun in 1901, was itself an influence in turning codes and practice toward the large research libraries and in fixing catalog arrangement in the dictionary card form, since the LC cards were designed for such an arrangement and were tailored for the largest research library in the country.

Codes

The cataloging code, a set of rules for the guidance of catalogers in selecting and preparing entries for catalog records, is necessary to provide consistent records in a single catalog and to make cooperation in cataloging possible. For a pleasant journey through code development during the century following Cutter, the reader should see Dunkin's interpretative *Cataloging U.S.A.* For a broader sweep through cataloging history, Hanson and Daily's sixty-four-page, encyclopedic "Catalogs and Cataloging" provides a grid upon which to place the specialized histories.¹¹²

As has been pointed out, Dunkin emphasized the importance of Cutter, and anyone reading contemporary accounts and later references back to Cutter's work comes to agree. His *Rules* covered all aspects of the dictionary catalog except classification. Its clear and concise statement (in fifty-nine words) of the objectives sought in providing a dictionary catalog, and the means for obtaining them,¹¹³ its author's stated intention to "set forth the rules in a systematic way" and "to investigate what might be called the first principles of cataloging"¹¹⁴ bring an illumination to the subject which could not fail to have immense influence. Indeed, Hanson and

Daily point out that Cutter's objectives of the catalog were restated in the so-called Paris Principles by the 1961 International Conference on Cataloguing Principles, which laid the foundation for an international catalog code.¹¹⁵

Following the 1876 conference, ALA provided a continuing forum for the discussion of cataloging, and with the *Library Journal* serving as its official journal, a wide audience of librarians could be reached. In 1896 William Lane reported a survey of the state of cataloging to the World's Library Congress.¹¹⁶ He noted that of the several available codes Cutter's *Rules* was the one most generally followed, but his summary of points of agreement and disagreement among fifty-eight leading libraries showed continuing wide differences in cataloging practices.

The 1901 agreement between ALA and the Library of Congress that LC would begin to supply printed cards to libraries for current books focused attention on LC's rules for cataloging. This step and a 1904 invitation from the Library Association to issue a joint code resulted in the 1908 Anglo-American code, *Catalog Rules; Author and Title Entries*, published in both English and American editions with the few points of difference explained. This was the first international code, and it was narrower than Cutter, dropping the rules for subject headings.¹¹⁷

The following decades of code production, mingling ALA, LC, and Library Association efforts, and including the Vatican Code, have a fascinating history but one too detailed for this survey. The period was enriched by Andrew D. Osborn's "The Crisis in Cataloging,"¹¹⁸ with its appreciated cry for a return to basic principles. The next twin peaks in the process were the 1949 publication of the complementary *Rules for Descriptive Cataloging in the Library of Congress; Adopted by the American Library Association*, pub-

lished by LC, and the *A.L.A. Catalog Rules; Author and Title Entries*, second edition, published by ALA. The LC descriptive rules were greatly simplified and led to the hope that those for entry and heading might also be improved.

The steps which followed have been recently reported by Wyllis Wright, who participated prominently in them.¹¹⁹ American and English cooperation in developing a common code, which had been interrupted by World War II, was begun again. Seymour Lubetzky's *Cataloging Rules and Principles*, published by LC in 1953, pressed again for logic and simplicity in establishing author and title entries. He was strongly influential in the deliberations of the IFLA International Conference on Cataloguing Principles, Paris, 1961, which resulted in the Paris Principles mentioned above.

The *Anglo-American Cataloging Rules*, developed under the aegis of American, Canadian, and British librarians, and published in separate American and British editions in 1967, include rules governing entry and heading, descriptive cataloging of monographs and serials, and cover some non-book materials. The *Rules* represent compromises with the Paris Principles, compromises urged by the realities of cost and the cataloging product of the past. One hundred years after Cutter, catalogers of the three nations are working on a second edition of the *Anglo-American Cataloging Rules*. Whether they can make progress toward simplicity and internationalization remains to be seen.

Subject Analysis—Subject Headings

The provision of the subject approach to a library's holdings, whether made up of the subject entries in the dictionary catalog or a separate catalog, was still a subject of some disagreement during the early years of ALA's first century. By 1876 card catalogs had al-

ready been opened to the public for use, and subject entries had been based on the content of the publication rather than the earlier practice of basing them on the wording of the title.¹²⁰ As the Librarian of Bowdoin College put it in 1893, "The subject catalog, in its development and almost universal use, is peculiarly American."¹²¹ During the proceedings of the English conference of 1877, with its large delegation of American librarians, Cutter took the floor to speak of the matter:

My English friends seem to consider a subject-catalogue as something very excellent, to be sure, but utopian—impracticable. With us, on the contrary, a library that has no subject-catalogue is regarded as little better than one which has none at all. As to the difficulties of classification and the liability to mistakes in dealing with subjects with which one is unacquainted (which has been rather despairingly insisted upon), in all the works upon library economy you will find that the first qualification of the librarian is universal knowledge. Of course if this requirement is fulfilled, the objection is removed, and if it is not, Carlyle's dictum may profitably be applied here: "After all, the worst catalogue is none at all," or, it is expressed in an old proverb, very worthy to be taken to heart by librarians, "Half a loaf is better than no bread."¹²²

Cutter had been involved in a discussion on the same subject outside library circles earlier in the year. Fiske's *Atlantic Monthly* article provoked a letter from Harvard Professor H. A. Hagen to the *Nation*, published in the January 18, 1877, issue.¹²³ Dr. Hagen, no doubt speaking from the background of his German education, argued for the manuscript book catalog, providing only an alphabetical listing of library holdings. His main point was the great cost of the subject listing, for which he felt published bibliographies to be perfectly good substitutes. Cutter came to Fiske's

defense with a letter published in the *Nation* of February 8, answering Hagen on every point.¹²⁴ In the matter of the subject catalog, he swept Hagen's suggestion from the field:

The objections to giving up subject-catalogues in libraries and substituting bibliographies are, first, the non-existence of the bibliographies; second, the incompleteness of such bibliographies as there are; third, the fact that bibliographies "begin to be imperfect even before they are published;" and fourth, the inconveniences of using them even if complete and brought down to date.¹²⁵

Other librarians joined the contention,¹²⁶ and the subject approach continued to be considered necessary, in spite of its cost, in American libraries.

Cutter provided the only American code for subject headings.¹²⁷ In the first edition of his *Rules*, he stated the two objectives for the subject catalog, namely, to enable a person to find a book of which the subject is known, and to show what the library has on a given subject and in a given kind of literature.¹²⁸

It is interesting that so major a tool as the subject catalog has not evoked a later code. Following Cutter, there have been only lists of subject headings and attempts to "arrange inherited practice into some sort of system."¹²⁹ Lyle's advice to the college library is to have both class numbers and subject headings provided by the same person and to provide as essential tools for that person the official record of the subjects used in the library and the standard published lists.¹³⁰ The two basic published lists used in this country are the Library of Congress list, meeting the needs of research libraries, and the Sears list for smaller libraries.

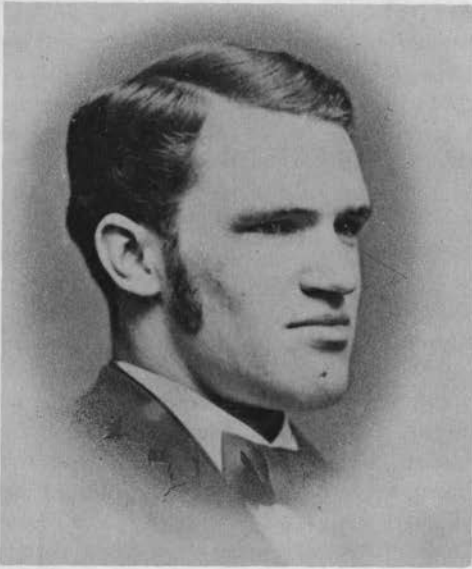
The strongest ally of the catalogers in their loyalty to the subject catalog has been the reference librarian. During the fifty-sixth ALA Annual Conference, Columbia's respected reference li-

brarian, Isadore Mudge, rose to its defense. She characterized the catalog as the most important reference tool in the library and pointed out that "it contains almost the only reference work done in that library which is at all permanent in character."¹³¹ She made clear the disadvantage of realizing savings in the cataloger's time by reducing subject analysis and thus increasing the cost in the time of reference librarians and users.

Subject Analysis—Classification

The written evidence which we have about libraries shows that classification as we know it today had not been thought of in 1876. The use of the call number both to assign a work to its primary and fairly specific subject area and to place it on the shelves in a position relative to other titles of its class had not been conceived. Libraries with sizable collections placed them on shelves in areas assigned by broad subjects, if at all, and controlled them by fixed location. Fiske's description of processing at Harvard suggests that not even broad subjects were assigned. Instead, the assignment of an alcove number and a shelf number within the alcove followed after collation and the recording of source information in the volume during the receipt process. Each alcove had a "shelf-catalogue." As Fiske put it, "When the book is duly entered on this shelf-catalogue, and has its cornerpiece [i.e., label inside the front cover] marked, it is at last ready to be 'catalogued.'"¹³²

Robinson, librarian of the University of Rochester, reported that his principle of classification for college libraries was that "the division of books should correspond on the whole to that division of the instruction which is best suited to the aims and purposes of the institution."¹³³ Certainly, this was a user-orientated plan, encouraging the teacher to examine his class of books,



Columbia University Libraries
Melvil Dewey

watch its growth, and "add its full force to the means of instruction in his department," while helping the student to "enter upon the use of it with very little difficulty." To the librarian "perplexed with books which belong in no class in particular," Robinson's advice was "to ignore the title, examine the book in detail, and put it into that department in which it is likely to be most extensively used."¹³⁴ In his discussion of the arrangement of books within the library (general and reference works together, followed by the various classes), Robinson makes it clear that each subject class is assigned a specific area of shelving and that volumes are shelved and found through the assignment of class mark and shelf number.

Dewey's *A Classification and Subject Index*, heard of before the 1876 conference, described there by Dewey on demand,¹³⁵ and explained in the 1876 *Report*, obviously filled a need. In the 1876 *Report*, Dewey wrote with what seemed to be pleased surprise: "Though the system was devised for cataloguing and indexing purposes, it was found on

trial to be very valuable for numbering and arranging books and pamphlets on the shelves."¹³⁶

The Dewey/Amherst scheme was indeed a giant step forward, and the Dewey Decimal Classification went on to sweep the country, first being used for the classified catalog and later primarily as a shelf arrangement for the dictionary catalog.¹³⁷ In spite of many other interests and activities, Dewey continued to control the development of the Decimal Classification until the end of his life, the thirteenth edition being published as a memorial edition in 1932, the year after his death. Thereafter, the Lake Placid Club Education Foundation continued to keep it up to date and to promote its use. Since 1930 an office at LC has added DDC numbers to some of the LC cards, and later the DDC editorial office was moved to LC. Today more libraries in the country use the Decimal Classification than any other scheme, as well as libraries in many countries around the world.

Although classification was the aspect of cataloging which Cutter omitted from his *Rules*, he was to make two lasting contributions to it. Cutter had been working on the problem of classification since 1873 without finding a solution which he wanted. He was attracted to the Amherst decimal plan but found that it did not give the close classification which he was seeking.¹³⁸ Eventually, his efforts led to his *Expansive Classification*, a scheme in a series of schedules of increasing (i.e., expanded) fullness. The first was elementary and intended for small collections; the seventh, not yet completed when he died in 1903, was designed to be adequate for a library of ten million volumes.¹³⁹ Just as he had provided for short-title, medium-title, and full-title dictionary catalogs to suit the needs of different libraries,¹⁴⁰ so he offered classification schedules of varying degrees of fullness to fill different needs. A survey made re-

cently showed that nine libraries in this country and three in Canada were continuing to classify the majority of their new acquisitions in the Cutter classification scheme.¹⁴¹

In connection with his Expansive Classification, Cutter devised a system of arranging individual books alphabetically by author within classes, these so-called book numbers consisting of the initial of the author's surname followed by decimal numbers. Cutter developed tables of numbers using two figures to arrange the authors alphabetically on the shelves; Kate Sanborn later developed the Cutter-Sanborn three-figure table.¹⁴²

Cutter's lasting contributions appear in the two principal classifications of today. His Cutter numbers regularly form the second element of call numbers derived from the Decimal Classification; both his Expansive Classification and his book numbers had a strong influence on the LC Classification.

The development of the Library of Congress Classification, appropriately for a national library and one which was to provide cataloging copy for many libraries throughout the country, was a team effort. Not only did several staff members work on it, but as plans emerged, they were taken to leading librarians of the country for opinions. The final decision on the general plan was made late in 1900. Development was begun immediately and is still not complete.¹⁴³ The story of its genesis is an interesting one and can be found in LaMontagne's *American Library Classification*.

During the development of the two classification systems which came to dominate the American scene, librarians were still making independent judgments about classification and developing individual systems. In spite of the first appearance nationally of the Decimal Classification in 1876, George Little reported to the World's Library Con-

gress in 1893 general agreement among college librarians that books should be arranged by subject but a wide difference of opinion as to the system of classification to be adopted.¹⁴⁴ Horace Kephart, librarian of the St. Louis Mercantile Library, reported to the same Congress (with an admirable bibliography on classification) the results of a survey he had made on the subject, which confirmed Little's generalizations. Kephart had sent a "circular of inquiry" to every U.S. library of 25,000 volumes or more, a mailing of 183 circulars. Of the 127 usable replies returned, it was shown that half of the libraries were using classification systems of their own and one-third were using Dewey in whole or in part. Mr. Cutter's system (so he said!) was rapidly growing in favor.¹⁴⁵

McMullen reports that when J. C. M. Hanson left LC and joined the University of Chicago Libraries in 1910, he found half of the books not classified and the rest classified according to about fifteen different systems, the dominant system being Dewey's.¹⁴⁶ During the ALA 1911 Pasadena Conference, a symposium on classification gave equal time to the Expansive Classification (in a paper written by William Parker Cutter, a nephew of C. A. Cutter), the Decimal Classification, and the Library of Congress Classification.¹⁴⁷ In 1927, Works reported that "classification presents a difficulty that is almost if not actually insuperable." His recommendation was that each library staff study the needs of the library users and adjust the classification as far as possible to meet such needs, and he pointed out that classification needs a high quality of personnel!¹⁴⁸

In a 1975 survey of Dewey Decimal Classification use in the U.S. and Canada, Comaromi, Michael, and Bloom found that about two-thirds of the sampling of college and university libraries counted were using the LC Classifica-

tion, but there was a striking difference between college and university use. Of the college libraries, forty-four employed LC and thirty-eight used Dewey. Of the university libraries, thirty-six used LC and one used Dewey.¹⁴⁹ Considering only libraries holding 500,000 or more volumes, 107 reported the use of LC and only fourteen of Dewey.¹⁵⁰ Seeking to assay the "Trend to LC" in college and university libraries, Robert Mowery studied 1,160 accredited four-year colleges and universities and found that more than half were using the LC system. However, counts made in 1968 and 1971 showed that the move to LC had lost momentum.¹⁵¹

Given the past history of classification and the present lack of consensus among academic libraries, it is not surprising that today's textbooks maintain a careful neutrality between the two prevailing systems.¹⁵²

Catalog Format

How did today's traditional *dictionary* (as opposed to classed) *card* (as opposed to book) *catalog* become the dominant format in American libraries? Card catalogs were used in libraries for some time before they were opened to the public in 1857, when Lloyd P. Smith introduced such a tool in the Philadelphia Library Company. Four years later Ezra Abbot, assisted by Cutter, provided one for Harvard, which became a model for other libraries.¹⁵³

According to Ranz, the final quarter of the nineteenth century witnessed the decline of the printed book catalog in American libraries. His excellent *The Printed Book Catalogue in American Libraries: 1723-1900*, covering the years of the printed book catalog's predominance, sets the stage for 1876.¹⁵⁴ An example of the attitude of that time is offered by Robinson, who initiated the University of Rochester's first card catalog, a manuscript dictionary catalog, in 1870 at a cost of \$329 in labor and ma-

terials for holdings of 9,560 volumes. He did so over many objections: "It presents to the eye only one title at a time; time and patience are lost in turning over the cards; it cannot be carried about, but must be used at the library, and only one person can consult a given part of it at a time."¹⁵⁵

In spite of objections, Robinson could report in 1876 that:

in some of the largest libraries of the country the card system has been exclusively adopted. Several of them have no intention of printing any more catalogues in book form. In others, cards are adopted for current accessions, with the expectation of printing supplements from them, from time to time. I think the tendency of the smaller libraries is to adopt the former plan, keeping a manuscript card catalogue of books as they are added, without a thought of printing.¹⁵⁶

Classed catalogs were never highly favored in the U.S. Early prevailing opinion of classed catalogs is summarized in an 1880 discussion of *College Libraries as Aids of Instruction*. Justin Winsor states: "For the skilled and habitual user, classed catalogues, especially those in which related subjects stand in close propinquity, may be more satisfactory; but such users are always rare."¹⁵⁷ Robinson agrees, "Classed catalogues are good for experienced readers, but for the student with little or no experience we believe every obstacle should be removed."¹⁵⁸

The single decision which locked in the dictionary card catalog as the predominant standard was the decision by the Library of Congress to sell its printed cards. The LC printed unit cards were designed for the dictionary rather than the classed catalog, and their availability was too great an advantage to be ignored.

These and other decisions which resulted in the predominance of the dictionary card catalog were based on li-

brarians' opinions for the most part, opinions growing out of experience and theorizing. Formal efforts to ascertain the users' points of view and to base conclusions on facts rather than general impressions came long after the basic decisions had been made.

Krikelas' survey of catalog use studies in 1972 lists fifty-four studies, the earliest made in 1931. Krikelas finds an increasing effectiveness of the later studies over the earlier ones but still notes difficulties in producing useful studies. He suggests that maybe the general finding that between 70 and 80 percent of all catalog searches are successful to the extent that the user is able to identify some relevant document should be interpreted to mean that librarians have been able to develop a rather sophisticated tool.¹⁵⁹

Cooperative and Centralized Cataloging

The twin dreams of cooperative and centralized cataloging very much concerned the librarians who met in 1876. Included in the first ALA constitution was a provision for the establishment of a Co-operation Committee.¹⁶⁰ An editorial appearing in the same issue of the *American Library Journal* which printed the constitution offered the opinion: "Of the standing committees, that on Co-operation will probably prove the most important organ of the Association, as most of the practical work will fall to its share or to that of its sub-committees. The Poole's Index, Size, and Co-operative Cataloging matters, now in special hands, are only a portion of the work to be done."¹⁶¹ Several months later, in the August 31 issue, Dewey wrote:

Co-operation has become among librarians a household word during the past year. . . . While we have so much with which to be satisfied, there has been less progress in what seemed the main question—co-operative cataloging. Here the greatest need was felt, and to this most of the profession look

for the greatest benefit. The September meeting [the New York Conference of 1877] will probably remove the first difficulties, by agreeing upon a code of rules by which the titles in any system shall be made. This decided, we are ready for the question, Who shall prepare the titles of new books as published? The Library of Congress or its copyright department? The publishers themselves? A cataloging bureau, established and maintained by the libraries of the country? An individual or firm, as a commercial venture? There are arguments for and against each one of them.¹⁶²

Progress was not as fast as the impetuous Dewey predicted. There were to be many steps between the dream and today's MARC tapes. Of basic importance was the standardization of descriptive cataloging and subject analysis, if the centralized product was to be of maximum use. Once there were common cataloging practices and a central producer, distribution was the next problem, solved by LC's card distribution service and by the printing of its catalogs and, later, the *National Union Catalog*. Much of the history of these efforts can be found in the early volumes of the *Library Journal*, and it has been summarized by Dawson and given in more detail in two master's theses by Vivian D. Palmer and Velva J. Osborn.¹⁶³⁻⁶⁵

The product that has evolved over the past hundred years, namely, LC catalog copy, has laid more stress on centralized cataloging. However, it has included cooperative cataloging in varying degrees through the use of cataloging done by selected libraries, especially those receiving books under the Cooperative Acquisitions Program and later those participating in the Farmington Plan for the acquisition of foreign titles.¹⁶⁶ The whole effort received a tremendous boost with the inclusion of Title IIC in the Higher Education Act of 1965. LC responded handsomely to this mandate to

acquire and catalog all currently published titles of scholarly value, as John Cronin's report to the New York ALA Conference in 1966 promised¹⁶⁷ and as LC has since expanded the resulting National Program for Acquisitions and Cataloging and its Shared Cataloging Program.

Another dream of the early ALA years was that of providing cataloging copy with each new book published in this country. The editors of the 1876 *Report* noted a suggestion from Winsor that publishers might send with each book a card providing a bibliographical description which would be suitable to be inserted in the library catalog.¹⁶⁸ During the past thirty years, the Library of Congress has taken a number of steps to make cataloging copy for domestic books more easily available, as follows:

1. In 1947, LC and the *Publishers' Weekly* arranged to include LC card numbers with the listings of new books in the "Weekly Record" section.
2. In 1951, publishers began to cooperate in a program to print LC card numbers in their books.
3. In 1953, the LC "All-the-Books" program was begun, a program to secure early copies of new books for early cataloging.¹⁶⁹
4. In 1958, LC undertook the Cataloging-in-Source experiment. While it failed, much to the disappointment of librarians, it provided information useful for a later try.¹⁷⁰
5. In 1961, LC began through its Cards-with-Books-Program to encourage publishers and book wholesalers to supply printed cards with the books they sold.¹⁷¹
6. In 1971, LC started the successful and continuing Cataloging in Publication program.

In the first volume of the *American Library Journal*, Dewey asked: "Is it practicable for the Library of Congress

to catalogue for the whole country?" A hundred years later, the answer is still not, "Yes!" but it has become "Maybe!"

SERIALS

Historically, serials have been rather on the edge of things in technical services. The librarians who gathered in Philadelphia talked a great deal about indexing periodicals, suggesting cooperative measures for updating Poole's 1853 *Index to Periodical Literature*, but they did not discuss the cataloging of periodicals as offering different problems from monographs. There was healthy respect for periodical literature, as they called the whole range of serials, and Spofford, who wrote in the 1876 *Report* on "Periodical Literature and Society Publications," dwelt on the importance of collecting and preserving complete files of such titles.¹⁷²

Cutter's *Rules* covered periodicals. He used the term without defining it in the first edition of his *Rules*; by 1904, in the last edition, he defined both *periodical* and *serial*. The latter, he wrote, was "a publication issued in successive parts, usually at regular intervals, and continued indefinitely,"¹⁷³ not so very different from the definition provided in the *Anglo-American Cataloging Rules* of 1967.

Cutter's entry rule for periodicals scarcely changed throughout his four editions. Rule number 54 in the first edition is "Periodicals are to be treated as anonymous and entered under the first word."¹⁷⁴ The fourth edition adds to this the phrase "not an article or serial number."¹⁷⁵ He listed four characteristics of a periodical and by means of them decreed that society memoirs, proceedings, and transactions were not periodicals. Thus, they could be entered under the name of the society, since they were the work of the society acting through its members. This issue of corporate entry versus title entry continues as a problem for serials catalogers and has been the subject of discussion with-

out full agreement in the current project to revise the 1967 *Anglo-American Cataloging Rules*.

The Works study of *College and University Library Problems* in 1927 noted eight definitions of the term *periodical* used by academic libraries. The meaningful differences were in the categories of publications included under the various definitions and the resulting differences in treatment among libraries.¹⁷⁶ Drury (1930), with his businesslike approach to library ordering, gave firm definitions of *serials* as the overall term for publications issued indefinitely in successive parts, *periodicals* as publications issued at regular intervals of less than a year, and *continuations* as all other serials. These differentiations provide a generally firm basis on which to set up the appropriate records for ordering and receiving titles, but are too simplistic for the requirements of cataloging.¹⁷⁷

Reading through the literature of the last hundred years makes it clear that, in addition to the problems of cataloging, serials offer much the same problems to the technical services which they always have—missing issues; the need to make new issues available as quickly as possible, frequent changes in title, format, and content; the increasing number of serials available for acquisition; increasing costs, and how to fit this function into the traditional acquisition/cataloging format.

Within the past quarter century, the serials identity within the technical services has become stronger with size. Andrew Osborn's *Serial Publications*, published by ALA in 1955, gave serials librarians their first general text and an excellent one. They had already achieved their own periodical, *Serial Slants*, beginning in 1950, submerging its identity in *Library Resources & Technical Services* in 1957, when the ALA reorganization created the Resources and Technical Services Division. There has

been a separate serials unit within ALA since the formation of the Round Table on Periodicals in 1926. In 1974, because of the interest of serials librarians, RTSD set up the Organization Study Committee to explore the possibility of organizing the division according to form rather than function. The committee recommended a continuation of the present sectional organization, which combines form and function.

BINDING

Binding was a concern of the librarians gathered in Philadelphia and was discussed on the conference floor. Winsor's advice was sought on the advisability of maintaining a bindery in the library, and opinions were expressed about the cause of binding deterioration—was it gas lights, heat, or impure air?¹⁷⁸ The Co-operation Committee, with Cutter as its first chairperson, reported the willingness of some publishers to furnish bindings specifically for libraries, and the committee listed the specifications it had drawn up for such a program.¹⁷⁹

During the 1877 conference, binding and preservation were again discussed, including treatment for water damage following a fire, the replacing of leaves by heliotyping, and the restoration of rare books. Later in the proceedings, President Justin Winsor mentioned a new material for binding books, which he had noticed in an English newspaper. He had obtained some sheets from Mr. Nicholson of the London Library and had tried them with good results. The new material? Buckram! Mr. Dewey rose to state that "it was the impression of the committee that buckram was to be the coming binding, but that a little more experience was needed before recommending it; that for the present goat instead of this buckram would have to be recommended for binding."¹⁸⁰ Well, it wasn't *his* discovery.

During the English Conference in

1877, a number of papers were given on binding and labeling books, including one by the same Edward Nicholson, "On Buckram as a Binding-Material."¹⁸¹ Nicholson strongly recommended the use of buckram, finding it durable and not too expensive, and predicted that it would largely diminish binding costs.

Binding, as a separate topic, was treated by Librarian of Congress Spofford in the 1876 *Report*.¹⁸² He provided six pages of well-informed, practical advice on all aspects of the subject, emphasizing the librarian's duty to go carefully and frequently through the collection to select those volumes requiring repairs or rebinding and to arrange for all books returned to receive the same scrutiny. In Spofford's opinion, "Next to the selection and utilization of books, there is no subject more important in the administration of a public library than the binding and preservation of the volumes."¹⁸³ Both Spofford and Winsor, as well as Poole,¹⁸⁴ emphasized the importance of good workmanship and materials in binding, and the reason for maintaining a bindery in the library was the poor binding which might be expected under commercial contract. Another common opinion of the time was the better binding value to be obtained by ordering books abroad to be bound before they were supplied.

The citations of literature on the care and preservation of books in Cannons' *Bibliography of Library Economy*, covering 1876 through 1920, give an idea of the details discussed. In addition to the topics above, there are such subjects as: how to open a book, methods of inducing care of books, book dusting, methods of keeping books clean, and directions for mending. The World's Library Congress volume included a ten-page paper on the "Elements of Library Binding" by D. V. R. Johnston, the New York State reference librarian.¹⁸⁵ He cautioned against the false economy of cheap binding, recommended bind-

ing abroad for cost and durability, warned that only larger libraries could save money by maintaining their own binderies, and, surprisingly, gave a rather negative report on buckram.

ALA set up a Bookbinding Committee in 1905, which answered the members' questions, maintained relations with publishers, worked for library binding of books commonly bought by libraries, and reported annually to the membership through the *ALA Bulletin* and conference proceedings. The ALA survey report in the mid-1920s included a chapter on "Binding and Repair," reporting library practice relating to what were evidently of current interest, namely, treatment of new books, dusting, inspection after circulation, washing and shellacking volumes, marking, care of leather bindings, duplication of missing pages (the usual method was to type them), collation before binding, costs, binding contracts, staffing of library binderies, sewing methods, strengthening devices, and handling of music. Buckram was definitely in as the best-wearing and best-bargain material for binding.

Works (1929) mentioned binding only as a problem of minor importance and singled out complaints of faculty relating to the inaccessibility of periodicals during the binding process.¹⁸⁶ The placing of service above cost was definitely in! When the College and University Postwar Planning Committee of ALA and ACRL dealt with the "Poor Quality of Many Books," it referred to the low esteem in which the writing itself was held, particularly in the academic field. However, one paragraph was given to the problem of the future, namely, the need for preservation and duplication of fragile materials.¹⁸⁷

The early concern about shoddy commercial binding was resolved by a series of binding standards developed jointly by the Library Binding Institute, a trade association organized in 1935, and its

predecessors with the American Library Association. Even before that time, the binders were working with librarians to provide specifications for acceptable library bindings. The results are today's binding standards, which are periodically revised.¹⁸⁸

In the 1960s the ALA Library Technology Project reported the results of its program on the Development of Performance Standards for Library Binding.¹⁸⁹ The project developed standards based on performance rather than the materials and methods on which the institute's standards are based. The difficulty of monitoring the newer standards has kept them from becoming a force.

Under the protection of standards, librarians have transferred their major concern from the quality of binding to the preservation of library materials. Programs to meet this concern are not yet history.

THE COMPUTER

And so we come from Cutter to the computer, from Cutter's clear statement of what cataloging should be as a basis for uniformity of practice to the computer as a tool for implementing cooperative and centralized cataloging with all that implies for library service. The academic library director has stepped out of the workroom into the office; the technical services have been accepted as a major division of the library's organization; acquisition records have been simplified and designed to furnish the first step in cataloging; descriptive cataloging has been codified, and classification has been reduced to two generally accepted systems; the catalog itself is a dictionary catalog, usually in card form, except for some pioneering computer-produced book catalogs; the Library of Congress is providing leadership for centralized and cooperative cataloging; serial users have accepted indexing for control of periodical literature, thus easing demands on the catalogers, which

the latter could not hope to meet; and commercial binding has been standardized so that libraries can get what they pay for and can concentrate on the problems of preservation.

In the late 1930s Fremont Rider plotted the growth rate of American research libraries and found that their collections doubled every sixteen years. Taking Yale University Library as an example, he calculated that by the year 2040, Yale would have an alarming total of 200 million volumes with a card catalog occupying nearly three-quarters of a million catalog drawers spread out over not less than eight acres of floor space.¹⁹⁰ But the computer is not easily alarmed, and by 2040, it will be able to handle such magnitude with ease. It may even store many of the texts in order to reduce the 6,000 miles of shelving which Rider calculated as needed.¹⁹¹

The potential of the computer for recording catalog records, making them readily available to many libraries, and providing a record of libraries' resources is assumed but not yet fully realized. Baumol and Marcus in 1973 saw computers moving toward greater use in academic libraries as a practical development of the future:

To date, the majority of successful data processing applications in libraries have involved mechanization of nonprofessional tasks such as circulation control and typing of bibliographic aids. At the same time, there are trends in process which may in the next two decades change the range of innovation that is economically feasible. These are: (1) the achievement of a standard format for bibliographic records in machine-readable form and the associated production at the Library of Congress and elsewhere of a sizable data base of such records; (2) a continuing sharp decrease in the cost of certain components of electronic data processing systems; (3) continuing increases in the capacity and reliability of electric communications

channels with concomitant decreases in the unit costs of the channels; and (4) the creation of evolving modular, computer-based library systems, which take advantage of the three other changes just mentioned.¹⁹²

Based on D. R. Swanson's predictions, Hanson and Daily describe the most advanced form of the catalog of the future as a computerized catalog with eleven performance goals:

User dialogues (programmed interrogation), aids to browsing, user-indexed library, access to in-depth information, wheat and chaff identification, national "network" of libraries, national network of bibliographic tools, instant information, remote interrogation and delivery, active dissemination, and quality control over library services (improved feedback).¹⁹³

The Library of Congress leadership in developing machine-readable cataloging (MARC) with its potential for providing instant availability of standardized cataloging coupled with the location of specific copies of texts makes networking possible. And networking is today's dream and tomorrow's reality.

During the 1876 conference, Barnwell spoke urgently on "A Universal Catalogue: Its Necessity and Practicability." Such a catalog "to include the literary stores of every existing or possible library" could be used in place of the single library's catalog. "A marginal mark could be made opposite the titles of such books as the library contained, and thus the deficiencies would also be ascertainable at a glance."¹⁹⁴ Is Barnwell describing the computerized system called OCLC (which stands for Ohio College Library Center, a name long since outgrown by this bibliographic data exchange system)? Isn't OCLC, in its present form, an incipient universal (main-entry, on-line) catalog for those library members which enter their full holdings in its immense data bank? And, of course, when it adds serials control, or-

der records, and whatever other ideas Fred Kilgour pulls from his far-ranging imagination, it will be much, much more.¹⁹⁵

There is still a long, fascinating trail to travel. Full exploitation of computers has been handicapped by our thinking in traditional terms. Networking tends to be thought of as an extension of present services rather than rethought as a new concept with new potential. The fact that the new machines impose new conditions on their users is another reason why the traditional conceptions must be rethought.

It has been said that as the specialists took over the technical services, the user was lost to view. The chief librarian in 1876, checking over an incoming shipment of books to assign them to subject alcoves, might be interrupted to answer a query from a student. Thus, the user was securely embedded in the librarian's decisions without conscious effort and without the need to communicate with other staff to discover the users' concerns. Harassed by floods of materials and pressures to reduce processing costs and arrearages simultaneously, the technical services staff may indeed lose track of the ultimate customer, an oversight which must receive more attention in the future.

The large academic libraries, which provide much of the cataloging leadership, tend to ignore multimedia. In 1976, we stand in relation to nonprint materials in much the same relationship as librarians of 1876 did to the book, although the latter at least had a deep respect for the educational importance of the book. These materials should be fully accepted as resources and given appropriate controls.

Uniformity of practice should be the lesson which cataloging teaches to the other library functions. "Uniformity of practice" is one way of describing standardization, the foundation on which networking can be built. Indeed,

standardization may be more important than logic in drawing up the rules to which, as Barnwell said on the opening day of the 1876 conference, we are to adhere "with the most slavish servility."¹⁹⁶ A hundred years after librarians organized for cooperative action, the technical services still have not agreed upon terminology to provide a means of gathering comparable statistics for sound comparison.

The role of the library heads is crucial to the technical services. As libraries became larger and the heads could no longer be so intimately involved in acquisition and cataloging operations, their concern did not become less. As ALA became involved in much larger issues—research, management, personnel, social issues, library school accreditation, and simply the difficulties of communication among an enlarged membership—the attention of the leaders was necessarily distracted from the technical services, which were left to the specialists. The difficulties in providing the technical services remained, but the chief librarian's interest turned from the details to the costs.

Turning from the greatly enlarged ALA, the chiefs found a way to continue their important dialogues within the restricted membership of the Association of Research Libraries. There, backed by the authority to provide supportive activity within their own libraries, they continued their cooperative exploration of common concerns, and they were able to do so on a much grander scale than was possible for their predecessors.

According to McGowan, the principal interests of ARL after its formation in 1932 were to develop and increase by cooperative effort the resources and usefulness of the research collections in American libraries.¹⁹⁷ These, of course, are basically the technical service concerns of acquisitions and cataloging. The programs and projects for which ARL has been responsible in these areas culminated in the addition to the Higher Education Act of 1965 of the provision which developed as the National Program for Acquisitions and Cataloging.

It could be argued that this activity without the early intimate knowledge of the technical service operations has resulted in some miscalculations. For example, the cooperative cataloging aspect of the Farmington Plan simply broke down as the cataloging demands of the participating libraries overrode the directors' commitment to providing early cataloging for receipts. But, on balance, the value of the ARL aid to technical services has been of decisive importance to whatever progress has been made, and will doubtless continue to be so.

In reviewing 1876, one senses an excited gathering of librarians' concerns and an exciting move toward cooperation in dealing with them. The need for cooperation today is at once grimmer than in 1876 and easier because of new technological support. In 1976, one feels a similar shimmer of excitement on the edge of new areas of cooperation and, again, librarians approaching them willing to face the hazards to each library's autonomy which the changes will bring.

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