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Collection Evaluation and the Bibliographer

Introduction

Richard M. Dougherty, Associate Director
University of Colorado Libraries
Boulder, Colorado

The University Bibliographer: who is he, what does he do, why has he become a key staff member of so many academic libraries in such a short time? Whatever the answers to these questions, professional interest in the bibliographer is running high. Last summer, in Kansas City, at the joint meeting of the Reference Services Division and the Acquisitions Section of RTSD, Robert Haro presented an exciting picture of the duties, responsibilities, and potential of the specialist bibliographer. Allen Taylor outlined his role as African Studies Bibliographer at the University of Indiana. Helen Welch Tuttle concluded the session by presenting a view from the opposite side of the coin, namely that the major responsibility for collection development still rests with the teaching and research faculties. The audience’s reaction to the speakers left the unmistakable impression, at least to this writer, that the bibliographer and his role in the development of research collections are vital issues that merit further discussions.¹

The present collection continues that discussion. The Cassata and Dewey paper outlines the guidelines developed at the State University of New York at Buffalo to evaluate the quality of its library collections. The paper should be very useful to others who are contemplating similar projects. As anyone who has undertaken a comprehensive evaluation can testify, it is a long-term project involving a great deal of tedious, exacting bibliographical checking.

As difficult as a collection evaluation might be, such programs can produce dramatic results. In the second paper, Webb reports on a series of evaluation programs undertaken at the University of Colorado. To a large extent, a substantial increase in the library’s book fund was attributed to the program. For the first time, the university’s administration was supplied with quantitative data reflecting the state and needs of the library’s research collections.

The Lopez paper is intended to help the neophyte bibliographer. Since most professional librarians were not specifically trained to function as bibliographers, this paper should provide useful insights to new recruits.

¹ The Haro and Tuttle papers appeared in Library Resources & Technical Services, XIII (Spring 1969), 163-174.

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The Evaluation of a University Library Collection: Some Guidelines

MARY B. CASSATA, Assistant Director for Public Services
Lockwood Memorial Library
State University of New York at Buffalo
and
GENE L. DEWEY, Chief of Acquisitions
University of Wisconsin Memorial Library, Madison

I

The evaluation of the collection of a large university library is a task seldom undertaken; more likely, it is one which is proposed and discussed, then relegated to a file folder as a good rainy year project. The paucity of articles in the literature on the subject of comprehensive and systematic evaluations of library collections testifies that few libraries have a surplus of staff, time, energy, or funds to commit to so demanding a problem. Nevertheless, this was the very task proposed at the State University of New York at Buffalo Libraries.¹

The State University of New York at Buffalo, the largest unit of the State University system, has been receiving increased financial support since September 1962, when it was formed by the merger of the former University of Buffalo and the State University of New York. Since the merger, the libraries have experienced dramatic growth, having doubled both holdings and staff since 1962. In 1964 book selection responsibilities at the SUNYAB libraries were redefined when a number of subject-bibliographers (hereafter used interchangeably with bibliographer) were assigned the dual responsibility of general and specialized reference service and book selection within their specific subject areas of competency.²

As a liaison between the faculty and the libraries, the bibliographers in the SUNYAB libraries are required to select intensively from the current output as well as determine methodically retrospective needs.

The increased demands for funds from all state agencies dictate the

¹ The libraries at SUNYAB include Lockwood Memorial Library, Art and Music Library, Health Sciences Library, and Science and Engineering Library—all on campus, as well as the Law Library and Ridge Lea Library which are at off-campus locations. Increasing demands for space on the already crowded main campus have had and will have the effect of further fragmenting library collections and operations until an all-new, permanent campus is constructed.

² The following subject areas were assigned to bibliographers: Anthropology; Art; Business Administration (including Economics, Labor and Industrial Relations, and Statistics); Classics; Education; Engineering and Applied Sciences; English and American Literature; Health Sciences; History; Law and Jurisprudence; Library Science; Linguistics; Modern Languages; Music; Natural Sciences and Mathematics; Philosophy and Religion; Political Science; Psychology; Social Welfare; Sociology; Speech and Theatre.

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necessity for carefully justifying and substantiating requests for additional support. State budget officials no longer accept broad justifications for acquisitions expenditures; they require evidence that state funds are being utilized effectively. Consequently, long-range budget plans developed by the libraries include definite programs for bringing undergraduate and research collections up to acceptable levels over several years with projections of the funding for these programs. The need for justification, coupled with the libraries' further need to determine their relationship to the objectives of the Five Associated University Libraries (FAUL), and the advisability of providing accurate and accessible information on the libraries' collections prompted the proposal for undertaking an evaluation of the SUNYAB collections.

At the request of the director and associate director of the SUNYAB libraries, the authors formulated a set of guidelines to be used by the bibliographers in evaluating the collections. While it was recognized that outside consultants might be engaged to evaluate the total collection, or that faculty might be asked to participate extensively in an evaluation project, it was also apparent that these alternatives would not permit the libraries to take full advantage of the evaluation with regard to collection building. The bibliographers would become more familiar with their subject areas as a direct result of the evaluation process, enabling them to select additions to the collections more wisely and to give better reference service in their subject specialties. Lacunae discovered by systematic bibliographic checking could become desiderata to consider for retrospective purchase.

In summary, all of the above reasons, rationalizations, and advantages for evaluating the collections far out-balanced any of the considerations for not undertaking this long-term commitment; hence, the evaluations project became a reality. What follows, then, is the methodology developed to guide this comprehensive evaluation of the collections of the SUNYAB libraries.

II

On the basis of the bibliographer's firsthand working knowledge of the libraries' collection in his particular subject area, he was asked to prepare a preliminary statement on how the collection measured up in relation to the total literature of the field. That is, he was asked to state whether the collection was "good," "so-so," "showed promise," or was "really bad." It was expected that this statement would be subjective and based primarily on all previous insights gained from the bibliographer's use of and familiarity with the collections, as well as his knowledge of the libraries' acquisition policy, cooperative acquisition policies, and uncataloged special collections, documents, and microforms.

8 The Five Associated University Libraries (FAUL) is a new cooperative association of the libraries of the State University of New York at Binghamton, Cornell University, Syracuse University, University of Rochester, and the State University of New York at Buffalo.
At this very early stage of the project the bibliographer was not only asked to rate the collection intuitively, but he was also asked to state the aims for the collection in his subject area as he viewed them. On the face of it, this appeared to be a simple request; yet it was reasoned that such a statement would be difficult to articulate. It became evident that the development of such an interpretative or conceptual statement would demand all of the insights previously mentioned plus a broad range of experience encompassing the bibliographer's total educational background in the subject area, i.e., as student-librarian-bibliographer.

III

The next phase of the evaluation required the bibliographer to discuss the curriculum in his subject area in terms of the scope and levels of the courses offered, the ratio of graduate to undergraduate courses, the number of master's and doctoral programs, present student enrollment as well as projections for the next several years, and, finally, the number of faculty as well as the projections for faculty over the next several years. Heavy emphasis is placed by the libraries on relating acquisitions to the curriculum, as evidenced by the first priority established for the purchase of materials needed in conjunction with course work. Additional information regarding the relationship of the curriculum to library policy could be obtained by the bibliographer by tapping a number of other reliable indices such as (1) obtaining reading lists for courses, (2) checking reserve book lists, (3) working cooperatively with the faculty, (4) delivering lectures on the libraries to various classes, and (5) giving library tours to different student groups. From this wealth of information the bibliographer was then asked to relate future plans for the curriculum to this subject area of responsibility and the collection.

IV

The basic collection of a college or university library constitutes the foundation upon which the research and special collections rest. The basic collection is usually thought of as those materials without which no college or university library could exist; it often forms the core of an undergraduate collection. Although SUNYAB has no separate undergraduate library or collection, present plans for the future envision such a library. For the first substantive step in actually coming to grips with the collections, it was suggested to the bibliographers that they systematically check the printed catalogs of specific undergraduate libraries\(^4\) as well as other basic general lists, such as *Choice's Opening Day Collection* and *Books for College Libraries*. From this systematic checking, the bib-

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\(^4\) These bibliographies are Harvard University's *Catalogue of the Lamont Library* (Cambridge, 1953); Michigan University's *Undergraduate Library Shelf List* (Ann Arbor, n.d.); and Princeton University's *Julian Street Library* (New York, Bowker, 1966).
liographer was expected to prepare a listing of the specific subject categories checked in each tool and to state the percentages of titles held by the SUNYAB libraries.

Another valuable source for building and/or evaluating the basic collection is the basic subject bibliography, often a “recommended four-star” bibliography which expands upon a list provided in any undergraduate collection catalog. These lists, such as Beckham, the Harvard list, and Janson are often the right-hand tools of the bibliographer. After systematically checking these lists, each bibliographer was asked to determine percentages of titles held and titles lacking as another evaluative measure. (The bibliographic essays contained in two recent issues of Library Trends were suggested as a possible source for selecting basic bibliographies in each subject area.)

Both of these approaches will be as useful in collection building as in collection evaluation. Collection building or book selection parallels many of the patterns involved in collection evaluation, and it is practically impossible to separate these processes. Well-planned collection building includes the types of bibliographic checking mentioned earlier. If for some reason some lists have not been checked for selection purposes, the collection evaluation, as outlined above, will identify those materials which are needed for the basic collection; the file of desiderata grows as the collection evaluation continues.

Little has been said thus far about the libraries’ periodical holdings. In view of the abundance and importance of periodicals, their part in an undergraduate or basic collection cannot be taken lightly. Since the most important sources of periodical citations are the various indexing services, each bibliographer was asked to indicate which lists of periodicals indexed had been checked to insure adequate coverage. For each checked list the percentages of current titles received and back issue titles held were requested. In addition, there are many periodicals lists basic to subject areas which could be similarly checked.

Once the collection evaluation at the basic or undergraduate level had been completed the subject-bibliographers were asked next to evaluate the research collection. Whereas the undergraduate collection is the cornerstone of a college or university library, the research collec-

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tion should reflect desirably the depth of scholarship of the total university. The criteria for measuring the research collection are more difficult to define than are the criteria for measuring the basic or undergraduate collections; the principal index to a research collection’s strengths and weaknesses lies in the printed and manuscript primary source materials as well as in the important secondary sources in the various subject fields. Standard bibliographies for research collections are seldom available. Instead, the bibliographer must resort to a variety of approaches which in turn attest to his expertise in a given subject area.

One suggested approach for testing the strength of a subject collection is to determine whether recent scholarly output could have been written by utilizing the resources available at the SUNYAB libraries. By checking the bibliography and footnotes of a definitive book or dissertation against the libraries’ holdings the bibliographer might make such an assessment based on the percentage of titles held.

For the field of literature, a different task was proposed. Here, the bibliographer might determine the percentage of authors (as listed in the Library of Congress classification schedule) represented in the libraries’ card catalog. Another suggested evaluative measure was to assess the number of titles held in terms of the author’s total output. A check of the subject card catalog under the author’s name would reveal another important indicator of the strength of a collection, that is, the number of critical works about these authors.

For subject areas other than literature, it was suggested that the bibliographer determine the number of titles held under major general and specific subject headings within his area of speciality. This quantitative information might be supplemented by determining the number of titles included in specific LC classes by consulting the shelflist.

Still a different and more unique approach might be taken by the subject-bibliographer; i.e., by using Lee Ash’s Subject Collections, a guide to special book collections. By comparing the number of items held in any given subject area of the SUNYAB libraries’ collections with the holdings in special collections in libraries across the country, a broad comparative evaluation might be made.

Considering the resourcefulness of the various subject-bibliographers, any of these approaches might lead to additional avenues of evaluation, either quantitative or qualitative. Further consultations with authorities or special librarians possessing specialized knowledge in a subject field might suggest additional measures for evaluating the undergraduate and/or research collections.

VI

Although the present methods of selecting current materials have little direct relationship to the evaluation of the libraries’ extant collections, today’s methods of book selection will, to a large measure, determine how effectively the collections will be enlarged and streng-
thened. Prudent selection of current materials alone will result in an excellent collection after a number of years. For this reason, each bibliographer was asked to list those regular book selection procedures which he follows.

The Library of Congress proofsheets have provided an excellent way of keeping up with current book production; with the expansion of coverage brought about by the Shared Cataloging project, these proofsheets have become even more important as a selection tool. Proofsheets are sorted roughly by Library of Congress classification and made available to the bibliographers for selection purposes. Frequently, bibliographers review several sections of the classification in order to cover their subject fields effectively; also proofsheets are often exchanged in subjects where disciplines and classification overlap. Each bibliographer was asked to report which sections of the Library of Congress proofsheets he reviews for selection purposes. In addition the subject-bibliographers were asked to indicate those current national and/or trade bibliographies—another important source of information about current books—regularly reviewed by them.

Scholarly journals in a subject area also furnish a great deal of information on current materials in that subject. Although many of these journals are rather slow in listing and/or reviewing new books, they remain a useful resource for the librarian. Each bibliographer was asked to list other current bibliographies he reviews for selection purposes, e.g., Public Affairs Information Service, Essay and General Literature Index, Bibliography Index, Biography Index, and lists of new acquisitions from other libraries.

VII

A close relationship between the bibliographer and the faculty, particularly with relevance to the libraries' collections, is expedient in building a vital collection that will support instructional programs and university research. The library's administration, cognizant of the importance of the interactive role between bibliographer and faculty, encourages each bibliographer to establish regular contacts with his faculty library committee and/or faculty representative. These contacts between the bibliographer and his committee or representative may consist of nothing more than visits between the library and the department. They may sometimes be more formal, with the bibliographer being invited to faculty meetings to deliver progress reports on such topics as the state of the collection, the book budget, and the libraries' future plans for the collection. Or, a group of bibliographers, all concerned broadly with the same subject area (e.g., bibliographers in modern languages) and members of the library administration, may be invited to carry on a dialogue with representatives of the corresponding academic departments. Such meetings may result in the exchange of valuable information, the development of guidelines, and the establishment of priorities.

The degree of faculty interest as expressed to the bibliographer was
considered, then, as significant to the overall evaluation project. Each bibliographer was asked to indicate this interest on the following scale: (1) "very much interest," (2) "interested," (3) "agreeable, but no initiative," and (4) "no interest or concern." The level assigned was determined by the frequency of faculty requests for purchasing particular books and periodicals, by the degree that departments communicated with the bibliographer on relevant matters, such as faculty changes, enrollment projections, and curriculum development, and by general attitudes toward the building of the collection. It was also suggested that interesting and useful data might be obtained from a brief questionnaire probing faculty involvement in and concern about collection building.

Faculty may demonstrate their interest in the library in other ways as well. For example, a department may assign some part of its graduate assistants' time to the library, where, supervised by a bibliographer, the graduate assistant may help in the selection process by checking particular specialized bibliographies against the libraries' holdings, assisting in building a desiderata file, or verifying bibliographic information. Or, a department's faculty may wish to show its desire to cooperate by checking antiquarian catalogs systematically for out-of-print titles and returning them promptly, reviewing proofsheets for current selection, or keeping an eye out for bibliographies in their favorite journals. Each bibliographer was asked to discuss and evaluate the amount of such assistance received in his evaluation report.

Finally, each bibliographer was asked to report on the priorities established by academic departments for the building of the collection in his subject area. Many departments do establish firm priorities for current selection, retrospective book buying, and current and retrospective periodical selection.

VIII

The main findings of the evaluation project, the conclusions reached, and discussion evoked were to be presented by the bibliographer in the concluding section of his report. At this stage of the project the subject-bibliographer was to compare and reconcile his initial, intuitive assessment of and aims for the collection with his findings. As a result of the study a bibliographer would be able to place the SUNYAB collection in his subject area at some point on a continuum ranging from "an adequate (or inadequate) collection for undergraduate instruction" to "an exhaustive research collection." In terms both of the projections of the university's curriculum and his findings, he might then wish to restate his objectives for the collection. Each bibliographer might also assign priorities for the materials lacking in the SUNYAB collection and state any ideas he had for improving upon the method of book selection. It is anticipated that the evaluation of the collections at SUNYAB, once the initial evaluation projects are completed, will be updated annually without too much additional effort.
The collection evaluation project has been generally accepted by the bibliographers as a necessary task. Many of the bibliographers who have come to the staff fairly recently have stated that this is an excellent way to become better acquainted with the collection. Although it is not the purpose of this paper to relate the results of the project, nor even the exact methodology adopted by the bibliographers within the framework of the authors' guidelines, it can be reported that the project is proceeding well and that much work has already been done on it. Once completed, the methodologies developed by the bibliographers and their findings may well be reported in a future article.

Project CoED: A University Library Collection Evaluation and Development Program

WILLIAM WEBB
University Bibliographer
University of Colorado
Boulder, Colorado

Subject librarians at the University of Colorado wanted to know more about their respective parts of the collection. Most were new at their jobs, and the collections were large. What they wanted was a better “feel” for the collection, less intuition, more facts, but without the great expense of a detailed study. The library administrators may have sensed the yearning and the hesitancy, but they needed statistical data for budget presentations to the university administrative officers. Ideas and needs were hashed out in the inevitable meetings, and from the turmoil there emerged a healthy offspring called “Project CoED” (Collection Evaluation and Development), or more mundanely, Collection Development Program.

A quantitative/qualitative improvement of the collections was imagined as coming in two steps:

(a) Use sampling techniques to compare the library's holdings against standard bibliographies. The statistics would reveal the poverty of the collections in specific areas and thus goad the administrators to commit more university funds to the library.

(b) When the money arrives, choose one (or more) of the areas sampled and fill in the gaps.

Although the Collection Development Program did not quite turn out that simply, it did turn out. Here's how.

The Reference Department took charge of the program. Five areas were chosen for the initial surveys: medieval studies, art history, political science, physics, and Slavic studies. Four areas had been originally se-
lected—medieval, Slavic, Asian, and African studies—but the university deans rejected the original proposal and made their own substitutions. This is not as bad as it sounds—after all, the deans possess two kinds of power libraries need: money power and knowledge power. The deans know, at least theoretically, where the university is growing; their advice is essential to the growth of the library.

Reference librarians competent in each area hammered out the methodology. The operating principles were:

(a) Choose bibliographies which are recognized by faculty and librarians as standard guides.

(b) Study three types of materials in each area: reference, monographic, and serial literature.

(c) Use a sampling technique to provide statistical data.

(d) The results of the surveys should indicate percentages of titles owned by the library; average cost estimates could then be totaled to provide a dollar amount needed to purchase every title in the sampled bibliographies.

How did it really work?

The choice of bibliographies to be sampled was the most difficult and critical task. Some fields of knowledge have one or two standard guides, accepted, if not adored, by all. Other fields, such as political science, have no comprehensive, authoritative little golden calves. Interested faculty members provided some help, and the final choices provided adequate coverage for reference and bibliographic tools, monographs, and serial literature. In Slavic studies, for example, we used the following bibliographies: Karol Maichel, Guide to Russian Reference Books (1962); Paul Horecky, Basic Russian Publications (1962) and Russia and the Soviet Union (1965); and Witold Sworakowski, The Hoover Library Collection on Russia (1954).

The sampling technique appeared at first to be inadequate. We were dealing with different types of bibliographies, and comparability among them was virtually nonexistent. We therefore accepted as a working principle the fact that we would not directly compare apples and oranges. We used Winchell's Guide to Reference Books for the reference sections in three of the five areas but not in order to compare one area against the other. Further, we used 100 percent samples (i.e., searched every title) for the reference sections of four of the five areas. We simply wanted to know which reference-type titles we actually had on hand. Thus, rigid scientism was tempered by realistic pragmatism.

And speaking of sampling, the theory and the intricacies of sample techniques can be involved and rather frightening. But, for the purposes of our survey, we boiled it down to three simple rules: take a 10 percent sample when the universe is 100 to 1,000 items; take a 5 percent sample for up to 2,000 items; take a 1 percent sample for over 2,000 items. Statisticians may grimace, but the system worked. Follow-up tests showed the samples to be accurate within 3 percent. Project CoED did not need any greater accuracy.

Library Resources & Technical Services
Student assistants did most of the actual searching. Their instructions were relatively simple: take the bibliography; go to the public card catalog; look up every tenth, twentieth, or whatever entry; place a check beside it if we have it; place a small zero beside it if we do not have it. Professional subject librarians then checked the completed bibliography to see that students understood instructions; no rechecking followed (except for two follow-up tests of the sampling methodology). Then the number of entries the library lacked and owned were added and percentages derived. So much for product A.

Product B—dollar amounts necessary to acquire every title the library did not own—was a bit tricky. Each bibliography had to be treated uniquely. In Slavic studies, for example, virtually all of the titles listed in Paul Horecky's Basic Russian Publications are available in reprint at an average cost of $25.00. In art history, the average title cost from Books for College Libraries is $15.00. Great variations in the costs for periodical runs were found. Nevertheless, dealer catalogs did provide average costs and it was then relatively easy for a subject librarian to estimate the total amounts needed for reference, monographic, and serial titles in his area of specialization.

Conclusions of Phase I

(1) The surveys provided meaningful quantitative data, together with persuasive qualitative indices. In other words, they were worthwhile. They did not tell us what we lacked or owned in precise detail, but they did give a better “feel” than a “guesstimate.” In some cases we were shocked. We thought we were strong in political science, for example, but the survey showed that we were only so-so in the monographic literature, and, in periodical holdings, we were appalled to learn that we owned only 25 percent of select titles listed in Ulrich’s International Periodicals Directory.

(2) Student assistants can be used to check samples, but not 100 percent samples. Previous experience with graduate assistants from various departments on campus forewarned us that students are not reliable searchers. Our follow-up tests confirmed this. The principal stumbling block was the familiar problem of main entry. Not all bibliographies follow LC form, and sometimes students simply did not comprehend the filing intricacies of a large card catalog. Subject specialists therefore searched bibliographies of reference materials for which we wanted to know exact holdings.

(3) The surveys required much less work than anticipated. Put another way, they were cheap. Approximately 60 to 75 hours of student assistant time was needed for each survey, which comes to about $100 apiece. This is not a lot of money when considered as an investment. The return has been high. We cannot attribute a $200,000 increase in the book budget exclusively to Project CoED, but the impact of the surveys upon the university administration certainly had much to do with the larger appropriation for the library. Further, reference to
the surveys can be found in the university budget justification presented to the state legislature.

(4) Money aside, the surveys have paid off in the psychological sense of serving as rallying points. A university library is so large today that the patron—and the librarian—is almost literally lost in a maze of stacks. The survey data provided handles with which to come to grips with practical aspects of collection building. For the faculty involved in the areas studied, the surveys provided specific targets for "holy dissatisfaction." Too many of our faculty members had thrown up their hands in frustration at the whole library situation; the surveys channeled energies into specific recommendations, and helped pave the way for librarian–faculty dialogue and consequent understanding of mutual problems.

Table 1 presents the data for the survey of Slavic studies.

<table>
<thead>
<tr>
<th>Bibliography</th>
<th>Sample Size</th>
<th>Have</th>
<th>Lack</th>
<th>% Owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maichel (Ref. &amp; Bibliog.):</td>
<td>100% of 246 entries</td>
<td>88</td>
<td>158</td>
<td>35%</td>
</tr>
<tr>
<td>Horecky (Monographs—Russ. Lang.):</td>
<td>10% of 1,396 entries</td>
<td>52</td>
<td>87</td>
<td>37%</td>
</tr>
<tr>
<td>Horecky (Monographs—West. Lang.):</td>
<td>5% of 1,960 entries</td>
<td>63</td>
<td>40</td>
<td>61%</td>
</tr>
<tr>
<td>Sworakowski (Periodicals):</td>
<td>10% of 181 entries</td>
<td>a) More than 2/5 run: 2 10%</td>
<td>b) Less than 2/5 run: 1 5%</td>
<td>c) Lack entirely: 16 85%</td>
</tr>
</tbody>
</table>

Selection of English/American Studies

Three months after the completion of Phase I, we launched a massive (for us) program designed to fill in the gaps in our holdings relating to the literary and social history of England and America. We budgeted $40,000 over a two-year period and hired two additional student assistants. Again, the Reference Department shouldered the responsibility for drawing up a comprehensive program and selecting the bibliographies to be searched. Since we thought it wiser to build the collection systematically from standard bibliographies, we limited faculty participation to consultation on which bibliographies were to be used. We did not invite faculty requests for specific titles to be added to the collection.

The procedures followed in Phase II were different from those of Phase I, in part because we were not sampling. Each student assistant received a bibliography plus a thorough explanation of what the pro-
gram was all about. He or she was then given a brief set of rules pertaining to main entry problems, government documents, serial titles, and card catalog filing rules. After each bibliography was searched, a student then typed order cards for missing titles. A professional librarian then studied the cards, weeding out any titles or editions which, in his judgment, were not actually needed. The bibliographic unit in the Technical Services Department then re-searched the purchase requests, this time in both the card catalog and in the order file. We felt this slight duplication of work was worthwhile: student assistants cost less than trained clerks and the bibliographic unit would not be swamped with requests for titles already owned.

Conclusions of Phase II

It is still too early to evaluate completely the methodology of Phase II. Tentatively, we believe that if one is going to build a research collection, then he must have virtually every title listed in a standard bibliography such as Robert E. Spiller's Literary History of the United States (3d ed., 1963). The searching takes time and costs money. Our best estimate is that each title searched costs a nickel in student assistant time, plus another nickel to type each order card. To translate this procedure into gross figures, we have budgeted approximately eighty student hours per week; by the end of the academic year, our cost in student time will be about $4,000. Yet not all of this is additional cost to the library; strictly speaking, only $2,400 (for two additional student assistants) should be considered extra cost of the program, because our other student assistants continue to perform regular duties in the Reference Department.

The program, however, cannot be put merely into an accountant's framework. High on the list of cost-effectiveness is the professional staff development factor. If the role of the subject and reference librarian is to involve more than just the practical knowledge of where a few books are, and, on the theoretical plane, what some of those books are about, the librarian must have additional knowledge and even wisdom. The Collection Development program in English and American studies requires reading, study of bibliographies, judgment of the value of variant editions of an author's works. In other words, a self-education program for subject specialists is involved here. The use of students has freed the subject specialists from clerical tasks and allowed them the "leisure" for study and professional growth.

Third, we have found that two-thirds of the missing titles are out of print, which is unfortunate, but not catastrophic. We are ordering in-print materials first, and will send O.P. want lists to reliable dealers as we progress.

Conclusion

Inexpensive surveys can be catalysts for large projects: samples whet the appetite, provide local experience, and prove that a dent can be made.

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in the walls of ignorance which separate librarians from large collections. The significance of statistical data derived from surveys seems to grow in proportion to the distance from the library. The subject librarians realize the tentativeness, the qualifications, which lurk behind the figures. The library administrators, insofar as they are one step removed from the details, may be aware of nuances, but they tend to gloss them over for the sake of clarity. By the time the statistics reach the top administrative officers of the university, the bare figures are clothed in the raiment of kings—absolute, authoritative—and somewhat depressing. For the bald statement (even more bareheaded when put into columnar form) that the library possesses only 43 percent of the standard periodicals in the field of art history will force a frown across the brow of the Dean of Faculties. And statistics exercise a subtle tyranny over busy minds. The Dean, for instance, may not remember the statistic, but he will remember that “glumpy” feeling in the pit of his stomach when he first learned that the library lacks over half of the journals his faculty needs.

Further, surveys are a first step toward improvement of library holdings. As practiced at the University of Colorado, small-scale, inexpensive studies paved the way for a planned series of large acquisition projects, of which English and American studies is only the first. The university administrators no longer view the library as a bottomless pit. Not that they were never concerned about research capabilities on campus; rather, the surveys focused their concern and demonstrated needs in a way that they could act upon.

Finally, the Collection Evaluation and Development Program has contributed significantly to the professional growth of the staff and a consequent closer working relationship with the faculty. A concern for knowing quantities has led directly to a concern for quality. Put another way, the base metal of quantification has been transmuted into the pure gold of qualification—a better collection of books and a better collection of librarians.

A Guide for Beginning Bibliographers

MANUEL D. LOPEZ
Reference Bibliographer
State University of New York at Buffalo

Introduction

Discussions of book selection and the utilization of bibliographers or subject specialists in American academic libraries, with few exceptions,
lament the lack of qualifications among such specialized personnel. Many make reference to the intense subject training, the periods of internship, and the qualifying examinations required of European bibliographers as possible standards to which America’s bibliographers should conform. This guide is directed to the neophyte librarian who, either by chance, choice, or administrative decree, is functioning in the capacity of bibliographer.

The Initial Approach

Initially a bibliographer may be almost overcome by panic when he considers the enormity of his task, and the amount of money he is expected to spend wisely. But once experience is gained, a cry of poverty will soon replace the feeling of surfeit.

The first task of a bibliographer is to become familiar with the collection. Checking of comprehensive and/or critical bibliographies against the card catalog will reveal the relative strengths and weaknesses of the collection. A review of the shelflist will provide additional insights. Relevant abstracting and index services should also be checked. How many of the titles included in these services are owned by the library?

In addition to the assessment of the library’s resources, the bibliographic resources in neighboring libraries should also be considered. Visit other institutions and talk to the librarians. What regional publications are available (that is, regional union lists of serials, checklists of specialized materials, or listings of newspapers)? What expensive reference or bibliographical resources are available, e.g., the Cumulative Subject Index to Psychological Abstracts, 1927-1960 and the Dictionary Catalog of the University of California at Los Angeles? Is one’s library a member of cooperative ventures such as centralized cataloging, local specialized interlibrary loan arrangements, and/or cooperative acquisitions agreements? Such relationships could have a direct influence on selection policies.

Once a bibliographer has become acquainted with local resources and their relationship to his own library, he can begin to systematically study his collection. Has an acquisitions policy been written; if so, what are its limitations and scope? Is the policy realistic? Is it outdated or inadequate? Will it provide for present needs and future objectives?

The finest library becomes only an accumulation of books without adequate bibliographic keys. A new bibliographer should familiarize

1 In this paper the terms “bibliographer,” “book selector,” and “subject specialist” will be used interchangeably and as defined by Kenneth Humphreys in “The Subject Specialist in National and University Libraries,” Libri, XVII (1967) 9. “A subject specialist is a member of the library staff appointed to develop one or more aspects of a library’s technical or reference service in a particular subject field.”

2 The vagaries of the qualifications, status, and utilization of bibliographers has been well illustrated by Robert P. Haro’s survey “Book Selection in Academic Libraries,” College & Research Libraries, XXVIII (March 1967), 104-106.
himself with the card catalog and the philosophy of the cataloging department. Further, if special collections exist, how are they recorded? The existence of special files and notebook records are not unusual for archival, rare books, manuscripts, and other materials. Further, the policies governing the handling of near-print materials should also be investigated. It is important to determine how such materials are ordered and serviced. Is there a vertical file and what are the policies regarding subjects, size, and retention of material? Equally important is a thorough knowledge of the policies and procedures regarding the acquisitions of periodicals (current subscriptions and back issues), microforms, and government documents (federal, state and foreign). For example, is the responsibility for acquiring duplicate and replacement titles borne by the bibliographer?

The Faculty and the Curriculum

While most members of the faculty are the first to admit that the pressures of teaching, research, and committee work leave them with little time or inclination for book selection, their first reaction, nevertheless, to a bibliographer, “an outsider,” may be negative. There are a variety of reasons for such an attitude: fear of losing what has been considered a traditional prerogative or the feeling that the appointment of a bibliographer is an oblique criticism on his acumen as a book selector. Consequently the first meeting with the faculty should be handled with tact. A perusal of the courses offered, statements of objectives and goals found in the college or department’s catalog will provide some guidelines. If possible, obtain the reading lists used by different faculty members and also review the department’s reserve book lists.

At the first conference—listen! Assess the faculty’s attitude toward the library, its collection, and its services. Some faculty members, particularly adherents of a particular school of thought in an academic discipline, may be fearful of an intellectual prejudice on the bibliographer’s part and consequently challenge his qualifications. Usually a faculty member will be placated when it is explained that the bibliographer is a specialist in the literature or bibliography of a subject as opposed to being an expert in a particular aspect of the discipline (the two, however, are not exclusive, and even if a bibliographer possesses the necessary subject training, this would not be the time to inform the skeptic of it).

At the first meeting, the bibliographer should assure his faculty that their participation in book selection is welcomed at all times, and that their assistance on particular problems will be appreciated. However, it should be made clear that the ultimate responsibility for the collection rests with the bibliographer. A good collection is more than the sum of the immediate bibliographical needs of the students and faculty, and while their advice and expertise will be welcome, the library and its collections cannot be directed by a few vociferous members of the academic community. This philosophy would, however, need to
be couched in more diplomatic terms.

One member of a teaching staff might be selected or appointed as the "library representative" with all communication and book orders from the faculty forwarded through him. The advantages of such an arrangement are many and reciprocal: (1) formal and closer means of communication are established between the library and the department, and (2) a review of library orders by a colleague tends to eliminate requests for nonrelevant (to the department) items and also acts as a deterrent for those individuals who would exploit the department's budget allocation for their own research and/or hobby interests. A departmental acquisition policy can be extremely useful in resolving selection problems created by faculty requests as well as answering some of the bibliographer's own questions.

With the assistance of the faculty, a system of priorities should be formulated. The following brief statements are offered only as examples:

Priority One.

Those bibliographic materials, monographs, bibliographies, periodicals, etc., necessary to support the present and projected curriculum.

Priority Two.

Materials that will create a well-balanced subject collection. That is, this priority designation will be used regarding the selection and acquisition of the "classics" and standards, regardless of form, in the subject area. While translations of foreign materials are to be included in this category, material written in the original language also is to be obtained.

Priority Three.

Extensive acquisition in the subject area limited to the formulated interests of the department. Consequently those publications that are usually included in another discipline will be purchased only if they are within the scope of the stated interest of the department.

Priority Four.

Research materials for faculty and graduate publication should be considered carefully. The department's library allocation is not unlimited and as a consequence the facilities of interlibrary loan and the processes of photoduplication should be given first consideration before the expenditure of department funds for items that will be of limited use.

In addition to preliminary meetings with the faculty, the following information should also be obtained: (1) number of undergraduate majors, (2) number and levels of graduate students, (3) projected enrollments for the next year, the next five years, (4) future plans of the department (new programs, courses, institutes, etc.), and (5) specific research interests of the faculty. Only after this information has been
acquired can the evaluation of a collection really become relevant.

**Preliminary Evaluation of the Collection**

Does the reference collection include the biographical sources, directories, abstracting and indexing services relevant to the subject area? Are they supported by specialized union lists of serials and subject union catalogs as well as statistical resources, guides to the literature of . . . and specialized book review sources? Does the library currently receive the bibliographical publications that will be needed to function effectively? The process of checking comprehensive and critical bibliographies against the library's holdings should have already been initiated. Does the collection include the "classic" and standard works in the subject area? How well represented are the writings of the pioneers and major contributors to the development of the academic discipline? What supportive resources are available, i.e., dissertations, reprints, near-book near-print materials, vocational, grant, and scholarship material?

Most libraries have had at least one period of budgetary lean years in their history. Consequently, what titles published during those times need to be added to the collection? Were periodical and serial subscriptions cancelled during that time? Have they been renewed? Is it necessary that the volumes lacking for the intervening years be added to the collection?

Browse in the stacks. Does the collection need weeding? Examine the overall conditions of the books. Estimate the percentage of titles that should be bound or rebound.

A profile of the collection's weaknesses could emerge from a study of interlibrary loan statistics. This approach must be applied cautiously as these statistics are subject to a number of variables.

**Acquisition of Materials**

Perhaps no other individual on a library's staff must be as familiar with all aspects of the library as the bibliographer. His success depends upon his knowledge of and relationships with the various departments. Vital to that success is the acquisitions department. Some bibliographers acquire the erroneous idea that the acquisitions department exists only to do their bidding. This attitude is unrealistic and seldom conducive to a successful partnership.

The bibliographer's responsibilities and obligations to acquisitions will be considered later. It should not be necessary to urge the bibliographer to learn the procedures and problems of the acquisitions department. For instance, does the library utilize blanket orders or standing order press arrangements; if so, with which publishers, what subject areas are covered?

The acquisitions department has many responsibilities and cannot be expected to cater to an individual subject specialist who may be simply one of many; consequently, a bibliographer should develop his
own sources of information. For example, specialized lists of professional interest groups can be found in the national directories of a discipline. He can also request to be placed on the mailing lists of such groups and informed of any publications available or to be published. The catalogs of out-of-print booksellers and dealers specializing in subject fields are particularly valuable.

While contacts with various societies and associations will provide an awareness of a certain amount of inexpensive and gratis material, the obvious source for such near-book, near-print materials is the Vertical File Index. To complement the items listed there, almost every discipline publishes lists, usually in a periodical, of free and inexpensive materials available.

The selection of dissertations has been facilitated by the recently refined subject index to Dissertation Abstracts. However, if D.A. is used as a selection device, it must be done with full awareness of its limitations. Not all institutions contribute to this cooperative venture. It is possible that the universities granting degrees in the areas of research of greatest interest to a bibliographer do not participate. Consequently, the situation may require the supplemental use of American Doctoral Dissertations.

The gifts and exchange unit of a library, if properly utilized, can be an invaluable resource. Sometimes the only way to obtain a title is by exchange; this is particularly true of the publications of developing countries. Review the gift and exchange lists of other institutions. From out-of-print and desiderata files a bibliographer can develop his own “want list” to be circulated by his gift and exchange department.

The serials department, in importance to the bibliographer, is second only to the acquisitions department. Very often, the serials department receives sample copies of new titles. Arrangements should be made to permit the bibliographer to review them. Useful in developing the serial aspect of the collection are the classified lists of titles in Ulrich’s International Periodical Directory, Irregular Serials and Annuals, the International Directory, and the Standard Periodical Directory. Retroactive purchases will be aided by information found in Dorothy Hale Litchfield’s Classified List of 4800 Serials, and of course subject-oriented union lists of serials will also be useful. Excellent current awareness serial selection publications are to be found in New Serial Titles—Subjects, Stechert-Hafner Book News, and Interdoc.

The decision to add back issues of a serial is not without its vagaries. Availability, form, and cost are factors that must be weighed; however, imagination and effort can sometimes produce remarkable results. Guide to Microforms in Print often will list titles not obtainable in any other form. Reprint publishers are generous with their catalogs, which often contain not only titles for sale but considerable historical information about those titles, e.g., mergers, and title changes. John Neverman’s International Directory of Back Issue Vendors: Periodicals, Newspapers and Documents (2d enl. ed.; New York, Special Libraries Association,
1968) provides an excellent subject approach to back issue dealers. And one should not overlook the possibility of writing directly to the publisher of a serial for a quotation. This is often a profitable and productive approach.

Since the bibliographer must review many publications on a regular basis, it is wise for him to develop a technique to ensure that relevant titles and subjects are not overlooked. One practical method is for him to create his own tickler file. Subject headings or categories and subdivisions that are to be reviewed regularly can be recorded. Each time a publication has been checked, the proper month or week is noted and the card is returned to the file.

The Role and Functions of a Bibliographer

Book selection is only one aspect of the bibliographer’s role in the library. As a member of the staff, his obligations are twofold. As the specialist in the literature of a subject area, every colleague and every department of the library should be expected and encouraged to utilize his particular expertise. Consequently, he should be willing to assist his colleagues in other departments. His assistance may be needed to verify bibliographical information or to locate addresses, and perhaps even to resolve cataloging problems of materials within the purview of his subject specialty.

His other obligations extend beyond the library and are specifically concerned with the faculty and students of the departments he serves. In this capacity he should arrange introductory tours of the library for new faculty and graduate students. The faculty are usually appreciative of the bibliographer’s offer to lecture to senior and graduate classes in the “Methodology of . . .” or “Bibliography of . . .” courses. Compilation of “Guides to the Literature of . . .” outlining the bibliographical resources of the library is an excellent way of creating favorable faculty-library relations. Providing the faculty with lists of standing order presses is another technique to consider and one that has the concomitant benefit of reducing the number of requests from faculty for titles that are already in the library or will be received automatically. The bibliographer should also function as a consultant to the faculty and graduate students regarding their research projects.

Often the rate of growth of a library is such that the production of accessions lists becomes prohibitive. When this situation occurs and the service is discontinued, library public relations may suffer. A successful compromise can sometimes be developed with cooperation from several quarters. The acquisitions or cataloging department may be able to provide the bibliographer with notification forms, usually a carbon copy of the order, that lists the author, title, and perhaps even the class number, of recently acquired materials. An academic department may believe that an accessions list is of such importance that it is willing to type and duplicate its own list if the forms described above are forwarded to the department.
Evaluation of Effort

Once the necessary selection procedures have been established and the problem areas reduced to a minimum, a periodic review of the program should be undertaken. This would include examinations of the collection, selection procedures, policies, and objectives. Only through periodic reviews will the bibliographer be able to measure the progress of the program.

Review the library's acquisitions policy. Is it still adequate, reasonable and consistent with the defined needs? Has a department modified its objectives and future goals? Will the statement of its "interests" have to be expanded, contracted? As precisely as possible, attempt to define the level of completeness of the collection; the collection supporting the undergraduate curriculum, the graduate research collection, and the exhaustive research collections. Is each collection at an appropriate level of completeness? Review the library's budget allocation for each area. Is it adequate? Does the situation require additional allocations to correct a particular debilitating lack?

A survey of the faculty will provide some concrete indication of the faculty's attitude toward the library, its collections, and indirectly a bibliographer's performance as a selector. A questionnaire might ask the faculty to compare and rate the collection against those in other libraries, the percentage of materials available in the library necessary for teaching and research needs; faculty might also be asked to indicate their own level of interest and participation in book selection. One of the most useful aspects of such a questionnaire is the open-ended "additional comments." These can be very enlightening. The tabulated results of such a survey must be studied very carefully as a variety of motives may bias the answers and attitudes. Do not be surprised at the individual who rates the collection as poor but indicates on the same questionnaire that the library has 85 or 90 percent of his teaching and research needs.

The evaluation of the collection will require several approaches. Document No. 481 of the Middle States Association of Colleges and Secondary Schools, "Evaluating the Library: Suggestions for the Use of Faculties and Evaluation Teams" will provide some guidelines. When appropriate, accrediting criteria and standards of professional associations should also be considered.

Quantitative indexes of a collection can be devised by checking against the card catalog, critical bibliographies, and the bibliographies from recent books and dissertations. A review of the out-of-print file may reveal a pattern of inadequacy.

The following technique provides, to a degree, a qualitative index of the collection. Select at random from a critical bibliography, a number of references. Check these references against the library's hold-
ings. If those references are available, then take, as your second refer-
ence, the first citation in that publication's bibliography, the first chap-
ter's list of references, or the first bibliographic footnote. Repeat the
procedure until either the library lacks the material cited or until a
fourth and final citation is obtained. Staggering the citations may also
be necessary, e.g., use the first item cited in the first reference in order
to obtain the second reference, the third citation in the second reference
to obtain the third reference. Thus a concentration of references limited
to a few authors may be avoided.

To quantify the above results assign a value of 10 to each citation
at the level of the first source, 20 to those at the level of the second
source, 40 to those at the third source, and 80 to those at the fourth
source. The rationale for the geometric progression of value is the
assumption that the materials on each succeeding level require a cumu-
lative expenditure of effort on the part of the patron and would be more
difficult to obtain due to the publication date.

In practice the above technique would operate in the following
manner. Assume that 10 is the number of citations at the first level. The
total number of citations at this level multiplied by the assigned value,
10, is 100. The total possible value for the second level is (10 × 20)
200, the third (10 × 40) 400, and the fourth is (10 × 80) 800. The total
for all four levels is 1,500. When the survey is completed, compute the
values attained for each level and total them. What percentage of the
possible total represents the material found in the collection. This per-
centage should indicate to the bibliographer the disparity between the
reality of the collection and the attainment of desired goals. How does
the library collection rate; is this figure consistent with the desired level
and purpose of the collection? What level of completeness does a li-
brary require?

Summary

Maturity, experience, critical judgment, scholarship, and subject
training are the qualities and qualifications that have been described as
necessary for a bibliographer. This guide, limited as it is to techniques
and procedures, should not be considered as a substitute for those per-
sonal qualities and formal qualifications. On the contrary, this guide
simply presents the craft aspects of the art of book selection.
The Development of Classification Systems for Government Publications

Doris Cruger Dale  
Assistant Professor  
Southern Illinois University  
Carbondale, Illinois

The classification of government publications has always presented problems to the librarian. It was not until the principle of provenance was adopted for the classification of documents that order was given to this material. The Superintendent of Documents classification system, begun soon after 1895, was used as a model by other governmental jurisdictions, both in the United States and abroad. The League of Nations and the United Nations developed classification systems based on the same principle. Providing these classification systems are coordinated with analytical indexes, such as the United Nations Documents Index and the Monthly Catalog of United States Government Publications, they are easy to understand, economical, and serve as suitable shelf-location devices.

The history of modern library classification is a story of adaptation of existing philosophical systems to library materials and needs. That this statement by Jesse Shera, although relating only to the classification of books, can also be applied to the development of classification schemes for government documents, is the thesis of this paper.

The early book classification schemes, those of Jefferson, Dewey, Cutter, Martel, Hanson, and Bliss, were heavily indebted to the philosophers Francis Bacon, Comte, Spencer, and Brunet. Similarly, if one considers government documents as simply a body of printed archives, then it can be said that the originators of documents classification systems, in deciding on an arrangement based on the issuing agency, have merely reverted to archival classification based on the principle of provenance. This principle was succinctly defined by Dorsey Hyde in a paper presented at the 1936 Conference of the American Library Association:

The adoption of this basic principle of archival classification occurred after the unfortunate experiences of the French and Belgian national archives in attempting to devise a rearrangement by subject (comparable to LC, Dewey, and other subject classifications) of their public records.

Under this plan [which was first promulgated in France by the Ministerial circular of 1841] the aim of the archives classifier is to devise a system which takes the government agency concerned, rather than the subject, as its starting point.
point and unit, and which “breaks down” this unit into its logical subdivisions of offices, bureaus, sections and the like, and finally reaches and assigns numbers to the various archival serials of each such final administrative subdivision.³

Since that time this principle has been the basis not only for all archival classification schemes but also for classification schemes developed for government publications. Walton suggested this hypothesis when he claimed that most of our difficulties with documents have developed because we have felt that the publication and arrangement of them should conform to standard library practice, and he proposed “that we substitute the technique of the archive for the technique of the document.”⁴ He maintained that “so far as international documents are concerned, the informal paradise of the archivist may prove, not only a relief, but also a practical way out.”⁵

When the Library of the Division of Public Documents of the U.S. Government began to classify its large collection of documents, it decided to follow the principle of archival arrangement in its classification scheme rather than the principle of subject arrangement. This system was developed in the Library soon after 1895, when the Office of the Superintendent of Documents was established. An explanation of the system was given by William Leander Post, then in charge of the Library, in the preface to a List of Publications of the Agriculture Department, 1862-1902.⁶ Post gives credit for the development of the system, which is a classification by governmental author, to Adelaide R. Hasse. In a small autobiographical pamphlet privately printed in 1919, Miss Hasse also claims for herself the origination of the classification scheme.⁷ The scheme was begun while she was assistant librarian in the Los Angeles Public Library, and the checklist that she prepared in conjunction with it was published by the Library of the Department of Agriculture as its Bulletin No. 9. In the preface to this list, Miss Hasse states:

The classification and notation are the result of practical experience and are offered merely as a suggestion to librarians who keep their files of government publications apart from their general collection of books. Such a notation may be applied to the publications of every Department, provided they are systematically classified after the system of the publications of this Department.⁸ A few examples of the scheme at this early stage will indicate the line of its development.⁹

| Secretary of Agriculture, Office | AG. | 2: |
| Annual reports | AG. | 21: |
| Monthly reports | AG. | 24: |
| Farmers’ bulletins | AG. | 37: |
| Forestry Division | AG. | 371: |
| Annual reports | AG. | 372: |
| Bulletins | AG. | 372: |
| Circulars | |

"Library Resources & Technical Services"
The basis of the present Superintendent of Documents classification scheme is the grouping together of the publications of the various departments, bureaus, offices, divisions, etc. The organizational structure of the government is followed, and subordinate bureaus are grouped under the parent organization. Each department or independent agency is assigned an alphabetical designation. To set off the subordinate bureaus, numbers are added to the symbols: 1 is used for the office of the parent organization, and the numbers 2, 3, etc., stand for other subordinate bureaus. The third breakdown in the scheme is for the various series of publications. Certain numbers are assigned to each series, and it was originally intended that these numbers should be the same for all agencies, but this rule has not always been followed. The most common numbers are:

- 1 Annual reports
- 2 General publications
- 3 Bulletins
- 4 Circulars

The individual book number or the number in the series follows.

A few examples will illustrate the present scheme, and show how it has changed from the original notation developed by Miss Hasse.

Secretary of Agriculture, Office
Annual reports A 1.1:
Farmers' bulletins A 1.9:

Forest Service
Annual reports A 13.1:

In comparing the two notation schemes, the refinement of the present scheme is evident. The original notation for the Farmers' Bulletins was AG. 24:—the AG standing for the Department of Agriculture, the 2 standing for the Office of the Secretary, and the 4 standing for the title of the series. It will be seen that in this notation the number for the subordinate office is separated from the letter designation for the parent organization by a period, and that there is no separation between the number for the subordinate office and the number representing the title of the series. In the present notation for the Farmers' Bulletin—A 1.9:—the author and the title are distinctly separated by the period, with the parent organization and the subordinate body (A1.) standing together to the left of the period, and the number representing the title (.9) standing to the right of the period. The hierarchical significance of this notation is much more evident. This division between author and title holds true for all of the numbers in current use, with the exception of a few numbers for publications of the Department of State where a form entry is used instead of an author entry, i.e., S 9.2:—General Publications Relating to Treaties.

Two other well-known schemes developed for government publica-
tions in the United States follow the same basic principles enumerated above. Raynard Swank developed a classification system for state, county, and municipal documents at the University of Colorado which also adheres to vertical divisions by issuing office rather than horizontal divisions by subject.¹¹ States are indicated by their numbers in the alphabetical list—5 being the number for Colorado. Following a dash, the legislature of the state is indicated by the letter A, and other departments are designated by Cutter numbers. Series are indicated by arbitrary numbers, and unnumbered publications are Cuttered by title. Bureaus and divisions are indicated by adding one capital letter to the department symbol; and municipalities and counties are interfiled at the end of each state by adding their Cutter number to the state symbol. A few examples will indicate how this scheme can be used along with the scheme for federal documents to bring together a unified collection of public documents:

5-A5 Colorado. Legislature. Senate.
4:31 Senate Journal of the 31st Legislature.

5D43-P75 Denver. Colorado. Police Department.

The notation system devised by Ellen Jackson for arranging public documents at the Oklahoma Agricultural and Mechanical College was also developed according to governmental structure.¹² This system designates by code all public documents—federal, state, county, municipal, interstate, foreign, and international—in an alphabetical arrangement by issuing agency. The system in 1946 had eleven main classes. Book, volume, and issue numbering followed in general conventional library usage. The main classes are designated by one capital letter, as follows:

A-J United States
M States of the United States
N Interstate Agencies
P Foreign Governments
T International Agencies

One example will indicate the complexity of this system:

DEM178    D—President
RE5       EM—Office of Emergency Management
R437      178—Office of Price Administration
v. 2, no. 6 RE5—Retail Trade and Service Division
          R437—The book number for the Retailer’s Bulletin
          v. 2, no. 6—volume and issue number

The one advantage of using this system is that publications of all governmental jurisdictions can be integrated into one collection. The chief disadvantage is the cost and time involved in individually classify-
ing U.S. government publications instead of using the system already devised for them and the system which can be coordinated with the use of the *Monthly Catalog*.

Lena Keller, Cataloger of the New York County Lawyers’ Association, in devising a classification for a law library states that government publications should be classified by author just as other law materials are.13 Her line of argument is that although lawyers are interested in the subject, the topic of law is pursued through the law of a particular jurisdiction—a particular country or state; and that this jurisdiction takes precedence over the subject. Law-making bodies originate publications covering a multitude of subjects, and subject classification for this material is not possible, any more than it is for an encyclopedia. She suggests using the Superintendent of Documents notation scheme for the author entry and then appending “law in process form divisions” as follows:14

1. Annual Reports
2. Bills
3. Hearings
4. Reports
5. Proceedings
6. Laws
7. Decisions and Digests
8. Series Publications
9. Miscellany

If you examine this scheme closely, you will see that her notations follow the process of law-making from bills through decisions.

Two systems developed in other countries also follow the archival principle of arrangement of documents. When the Public Administration Library of the University of the Philippines received a Rockefeller Foundation grant to build up its collection of Philippine government publications, it chose to adapt the Superintendent of Documents classification system for its documents.15 The library developed the Philippine Documents Classification Scheme based on its present governmental structure. A sample of a class number will illustrate its similarity to the U.S. system:

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ED15.9           ED—Department of Education
P53             15—Bureau of Public Schools
               .9—Monographic Publications
               P53—Cutter number for Title
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The arrangement of documents by issuing agency is also the basis of the classification scheme for the large collection of government publications in the Central Secretariat Library in New Delhi which was founded in 1900.16 An example of a class number will demonstrate how its component parts are put together:

*Volume 13, Number 4, Fall 1969*
CI-(SSI).1 J6
CI—Ministry of Commerce and Industry
(SSI)—The subordinate office of Small Scale Industries
J6—Not explained

This scheme also has symbols for regional zones and states. For instance, the Northern Zone of India is numbered 1, and the number for Delhi is 1D.

It was only natural, then, that both the League of Nations Library and the United Nations Library should devise notation schemes based on the issuing agency. However, both of these organizations developed two separate series of symbols, one for official documents, based on the issuing agency and one for sales publications based on a subject classification. The sales numbers were originally designed to help librarians place standing orders for various categories of publications in certain subject areas and were not intended for classification purposes at all. Sales numbers for the League publications were also assigned to non-sales publications, and therefore cover almost all of the documents; but this is not the case with the United Nations sales publications. Out of 396 documents and publications received by the UN Library in March 1958, only four had sales numbers, hence these numbers are not satisfactory for use as shelving devices. Roman numerals are used to designate subjects, and some designations used by the League have been continued by the United Nations with only slight changes, as indicated below.

<table>
<thead>
<tr>
<th>Roman Numeral</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>Health/Health Publications</td>
</tr>
<tr>
<td>IV</td>
<td>Social Questions/Social Welfare Publications</td>
</tr>
<tr>
<td>V</td>
<td>Legal/Legal Publications</td>
</tr>
<tr>
<td>VI A</td>
<td>Mandates/Trusteeship Publications</td>
</tr>
<tr>
<td>VII</td>
<td>Political/Publications on Political Affairs</td>
</tr>
<tr>
<td>XI</td>
<td>Traffic in Opium and Other Dangerous Drugs/Publications on Narcotic Drugs</td>
</tr>
</tbody>
</table>

The first classification system for League of Nations official documents lasted only briefly from its beginning in January 1920 to April 1921. It is based on the organizational structure of the League, but an arbitrary number was assigned to each agency, rather than an alphabetical notation, i.e., the number 29 was assigned to the Council, and the number 48 to the Assembly. The class number began with the year; so that the number 20/29/1 would be interpreted as the first document distributed to the Council in 1920. This scheme was changed on April 22, 1921, to the following type of number: C.240.M.98.1928.II. This number is read as the 240th document distributed to the Council, the 98th document distributed to a member of the League who was not a member of...
the Council, in the year 1928. The Roman numeral II is the class mark for the Economic and Financial Section of the Secretariat, where the document was prepared. This system, which used the name of the agency for whom the document was prepared instead of the name of the agency preparing the document as the main entry, developed into a rather cumbersome notational scheme.

The problems of documentation of United Nations publications are more complicated than was the case for the publications of the League of Nations. Winton lists six factors which have contributed to this situation:  
1. a greater number of principal and subsidiary organs,  
2. a more extensive membership,  
3. a greater volume of documentation,  
4. the demand for rapid reproduction and distribution,  
5. more extensive cooperation of both governmental and nongovernmental organizations, and  
6. the greater public interest in the activities of the United Nations.

The preliminary meetings of the United Nations at San Francisco and London provided a period for experimentation in documentation before the present system was put into effect. Bruce describes the notational system devised for the documents of the United Nations Conference on International Organization held in San Francisco in 1945. Two numbers were assigned to each document. The documents were numbered consecutively as they were received and registered by the documents officer, Waldo Chamberlin. In addition to this serial number, each document was assigned a symbol classification and a paper number indicating the organ of the conference from which the document originated and that particular paper's relation to previous documents issued by that organ:

- **Doc. 24 (English)**: The 24th UNCIO document.
- **P/8** (April 29, 1945): The 8th paper pertaining to the Plenary Session.
- **Doc. 80** (May 4, 1945): The 80th UNCIO document.
- **III/2**: The 2nd paper pertaining to Commission III.

Again the use of Roman numerals instead of an alphabetical abbreviation made it difficult to identify Commission III. The Commissions were numbered as follows: I—General Provisions, II—General Assembly, III—Security Council, IV—Judicial Organization. Committee 1 of Commission IV was the symbol for the International Court of Justice, a much more complicated symbol than the brief acronym ICJ. Corrigenda were indicated by (1), and documents reissued with new material were indicated by (a). The published set of the UNCIO documents is arranged roughly by subject, following neither the document numbering nor the series symbols notation. Since there is a detailed index to the collected published documents of this conference, both notation schemes are unnecessary in order to retrieve information.

The classification system of the documents of the Preparatory Com-
mission, established for the purpose of making provisional arrangements for the first sessions of the United Nations, was planned on the basis of UNCIO experience. Each UNCIO document had carried both a document serial number and a committee symbol and number. Because of the confusion of having two numbers, the Preparatory Commission documents bore only one designation based on the system of committee symbols and numbers. Chamberlin was again the Documents Officer in London; however, the development of the new classification system was largely under the supervision of Harry N. M. Winton, the Index Officer.

Each document number of the Preparatory Commission began with the symbol PC/ in order to differentiate the Preparatory Commission documents from the documents to be issued later by the permanent organs of the United Nations. The Executive Committee documents were labeled PC/EX. After this initial identification came a further committee symbol, if there was one, followed by arabic numbers in series:

PC/EX/136 The 136th document of the Executive Committee.

PC/EX/SEC/9 The 9th document of the Committee on the Secretariat.

Revisions, corrigenda, and addenda to documents were indicated by adding /Rev. 1, /Corr. 1, or /Add. 1 to the number assigned to the original document. This system is still used by the United Nations.

While the documents of the Preparatory Commission and of its Executive Committee are now primarily of historical value, an understanding of the documents system is useful not only to those performing research in the United Nations Archives on the machinery by which the United Nations as an organization was brought into being but also to those wishing a full appreciation of the documents system of the present organs of the United Nations. This is true because the documents system now used by the United Nations Secretariat is to a considerable extent based upon that of the Preparatory Commission, with modifications drawn from the system used by the League of Nations.

The first outline of the present scheme for United Nations documents was published on January 3, 1946, as the first document of the General Assembly. The scheme was revised often, as the organization of the United Nations expanded. Subsequent editions were issued separately for each organ: the General Assembly, the Economic and Social Council, the Trusteeship Council, the Secretariat, the Security Council, and the Atomic Energy Commission. In September 1952, a Consolidated List of United Nations Document Series Symbols was issued in a preliminary edition which superseded all of the previous editions. The latest edition of the classification scheme appeared in 1965.

A detailed description of the symbol series system is given by Brenda Brimmer in her excellent handbook. As with other classification schemes for government documents, the system is patterned on the
organizational structure of the United Nations, and its divisions in general reflect that structure. The basic system has as its first element a symbol which represents one of the main organs of the United Nations: A/, E/, S/, and T/ for General Assembly, Economic and Social Council, Security Council, and Trusteeship Council. The second element of the symbol indicates a committee or commission or a special body of the parent organ. These are indicated by the letters: C—Standing Committee, AC—Ad Hoc Committee, SC—Sub-Committee, CN—Commission, SUB—Sub-Commission, Conf.—Conference. An exception to the identification symbol of the commissions is the basic symbol for the Economic Commission for Europe which is E/ECE instead of E/CN. 10. The five major committees of the General Assembly are the following: First Committee—Political and Security; Second Committee—Economic and Financial; Third Committee—Social, Humanitarian and Cultural; Fourth Committee—Trusteeship; Fifth Committee—Administrative and Budgetary; and Sixth Committee—Legal. The ad hoc bodies comprise all committees and similar bodies of a nonpermanent character which are established by the major organs as circumstances require. Number designates of such bodies are assigned in the order of establishment or appointment tabulated according to organ: A/AC.13—United Nations Special Committee on Palestine (1947), A/AC.60—Special Committee on Legal and Drafting Questions (1952), A/AC.109—Special Committee on the Situation with Regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples (1962), and A/AC.118—Committee for the International Cooperation Year (1963).

Successive elements in the symbol further demonstrate organizational delineation; i.e., the Economic Commission for Africa is E/CN. 14/, while E/CN.14/CAP stands for the Conference of African Planners which was held in Dakar in 1964.

The last element in the symbol is a descriptive element which comprises a sub-series system. These are as follows: /Add.—Addendum; /Agenda; /Corr.—Corrigendum; /INF—Information Series; /MIN.—Minutes; /PV.—Verbatim Records; /Res.—Resolution; /SR.—Summary Records. The last number in the symbol indicates the number of the document in the basic series. Document numbering in the same basic series is consecutive and follows the order of registration in the Bureau of Documents. Renumbering does not start anew with each session of the United Nations, as it does with the documents of each session of the United States Congress.

In general, the translation of the complete symbol of a document should be read backward:

A/PV.1122 Verbatim Record of the 1122nd Plenary meeting of the General Assembly, September 18, 1962.


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Because the numbers are assigned consecutively throughout each session and continuing from session to session, this tends to separate serial publications and reports. The first annual report of the Secretary-General on the work of the organization bears the symbol A/65, the second report is A/315, the third report is A/365, etc.

Only a few arbitrary numbers for series have been established, such as those used by the U.S. Superintendent of Documents which bring all annual reports of a department together by assigning them the same series number—1. The United Nations Library has used this system to some extent by assigning arbitrary letters to its serial publications, e.g., SER. A—New Publications in the Dag Hammarskjold Library, SER. D. —Index Notes, and SER. E—United Nations Documents Index. Several of the departments in the Secretariat have attempted to do this with their serial publications in order to keep them together.

Some series of the United Nations are issued without any symbols. For instances, the general periodicals, such as the U.N. Monthly Chronicle, are issued without series symbols, as are the Treaty Series and the Official Records. This causes problems in libraries which attempt to shelve all UN documents together in a separate collection, and arbitrary systems of numbering have been devised for these publications. Many documents are published in two formats. For example, the annual report of the Secretary-General is published first as a provisional mimeographed document with a series symbol. The annual report is later reprinted in the Official Records as Supplement No. 1. Many of the original mimeographed documents are reprinted in the Official Records, either as Supplements or in the Annexes.

Two masters' theses have been written suggesting notational schemes for UN documents issued without series symbols in order to bring this material into relationship with the other publications. Thompson suggests using Y for yearbooks and Z for periodicals; so that the Journal of the General Assembly would have the number A/Zjo. He also suggests using the actual document numbers of the supplements in classifying the documents, rather than keeping this material together with the Official Records. This poses additional problems because series are then widely scattered, whereas the numbering of the supplements tends to remain the same, viz., number 1 is always the annual report of the Secretary-General. Johnson suggests a somewhat more complicated scheme. He proposes a new symbol composed of three elements: (1) the series symbol of the issuing agency as adopted by the United Nations, (2) the letters XX in order to distinguish these publications, and (3)
a Cutter number in order to distinguish publications issued by the same agency. In this scheme, the Journal of the General Assembly would be classified as A/XX/Jo7. For periodicals the Cutter number would be followed by volume and number, and for yearbooks the final element would be the year. He also recommends that official records should be kept together even though the supplements do have series symbols. For Official Records, he suggests using ZZ as the first element, the number of the session or the last two numbers of the year as the third element, and the numbers of the meetings or the numbers of the supplements or annexes as the last element. The classification number for the plenary meetings of the nineteenth session of the General Assembly would then read: ZZ/A/19/PV.1286-1302.

The United Nations Library has solved this problem of non-symbol serials by using Universal Decimal Classification notations after the basic departmental symbols.30 The symbol UN or the abbreviation of the specialized agency, such as WHO (World Health Organization), is the first element in the notation scheme as it is used in the United Nations Library. The call number for the United Nations Bulletin would be:

UNST United Nations, Secretariat.
DPI Department of Public Information.
(05) (Periodical Publications)

The advantages of a documents classification scheme based on organizational structure or the principle of provenance as promulgated in the nineteenth century can be summed up as follows:

1. The notation is simple, easy to understand, and provides for expansion.

2. It is economical to use, as the notation has already been assigned to both United Nations and United States government publications. The classification number is actually printed on United Nations documents. However, the Superintendent of Documents has never been able to work this out for United States documents.

3. As a shelf-location device, the classification scheme serves its purpose very well.

4. Full advantage can be taken of the analytical indexing provided by the United Nations Documents Index and the Monthly Catalog of United States Government Publications. The intermediate step of checking the card catalog can be eliminated.

5. Separate government documents collections require specialized librarians who in turn can provide better reference service.

The main disadvantage is that if different departments of a government publish material on the same subject, this material will not stand together on the shelf.

In conclusion, it may be stated that collections of government publications, whether of the United Nations, United States, or other jurisdictions, are most easily accessible to the student and the scholar if they are
classified on the basis of the archival principle of organizational structure. This statement is especially valid if these documents can be coordinated with analytical subject indexes.

REFERENCES

2. Ibid.
5. Ibid., p. 221.


Cataloging codes and printed card sequences are examined for solutions to the interrelated problems of entry and description for recurrent-edition reference tools. It is suggested that a uniform approach to these semiserial publications can benefit cataloging by 1) supplementing the categorical application of the Anglo-American Cataloging Rules to monographic editions and 2) by relieving catalog congestion and facilitating filing and searching through substitution of single open-entry card sets for the numerous sets required by monographic description.

CONTINUATION PUBLISHING has grown to proportions undreamed of when Panizzi and Cutter laid the foundations of descriptive cataloging. Yet our approach to book (as distinguished from serial) description and record still moves through traditional categories and determinations. We assume that the dividing line between “serials” and “editions” is clear, and that editors' and publishers' whims of terminology and issue, as recorded in the physical volume, are decisive. But current usage is so loose that our various glossaries are hard put to make a distinction with any real difference.

Theoretical confusion is compounded by parochial methodology, as reflected in even the best sources of today's printed cards. Catalogers seem to despair of readily and consistently determining the status of a growing number of recurrent-edition publications. These titles are usually reference works so frequently revised that they acquire continuation traits. Prior to the fourteenth edition of the Encyclopaedia Britannica most general reference aids could be expected to stay on the market in stable format from five to twenty years. A modern encyclopedia is considered a liability if its copyright date shows it unrevised since last year. Dictionaries, data-books, and bibliographies are quite as vulnerable. New “editions” are now the rule, not the exception.

The cataloging problem is simple to state—not so simple to answer: should these materials be treated as separate monographic editions, each with full descriptive detail, or should all editions and issues of one title fall together as serial, with open-entry cataloging and compressed itemization of minor differences? It takes but a superficial review of current
practice to show a paucity of guidelines, giving rise to a multiplicity of interpretations.

The definitions with which C. A. Cutter opened his Rules for a Dictionary Catalog are almost simpleminded, by today's standards, in their conciseness. An "edition" was "a number of copies of a book published at the same time and in the same form"; "added edition" was "another edition of a work already in the catalog." "Serial" meant "a publication issued in successive parts, usually at regular intervals, and continued indefinitely."

By 1943 conditions had changed sufficiently for the A.L.A. Glossary to drop "added edition" and to redefine "edition" as "one of the successive forms in which a literary text is issued either by the author or by a subsequent editor." Its characterization of "serial" fell back to enumerating the more typical varieties. Evidently the connotations of both terms were beginning to spread and change. In 1967 the Anglo-American Cataloging Rules (hereafter cited as AACR) found it necessary further to expand the concept of "serial" by substituting the phrase "bearing numerical or chronological designations" for the earlier "usually at regular intervals." This new definition also added "numbered monographic series" to its enumeration of serial types. The effect was to blur the distinction between monographic and serial publication, and to introduce the idea of numerical control within a variety of possible continua.

The problem of proliferating catalog entries for the constantly revised reference tool, while receiving little mention in cataloging literature, has not been altogether neglected. Andrew D. Osborn used the term "pseudoserial" for "a frequently reissued and revised publication which quite properly may be, and on first publication generally is, considered to be a monograph. After it has been reissued several times, however, it may conveniently be regarded as a serial." AACR in Chapter 6, on the description of separately published monographs, stresses the traditional inclusion in each catalog entry of all bibliographic details pertinent to distinguishing one edition from another. Some hint of a qualification to come in Chapter 7, on description of serials, would have alerted the user to what brief respite was to be made available:

Certain types of publications that are not true serials but that are issued frequently in new editions may be cataloged according to the rules of description for serials. These include certain directories, guidebooks, handbooks, etc., even though they may be of personal authorship.

No specific rule or definition is devoted to a more precise analysis of the conditions fostering such a decision, or of the precise nature of the materials lending themselves to such treatment. Possibly the vagueness was intentional, to allow local libraries to develop their own criteria. If so, Esther Piercy, a party to the code revision and an advocate of "commonsense cataloging," gave the smaller libraries to which her textbook was addressed little help:
Generally a new edition of a book is cataloged separately if it varies in content from the preceding one. Some works are frequently revised or issued at frequent intervals with different contents (such as almanacs, yearbooks, "Best plays," etc.); public and school libraries find it helpful to catalog these as open entries (like true serials), thus avoiding much recataloging. In research libraries many more editions of works are retained, and details of edition variation are important. For this reason those LC cards which catalog each edition separately are not followed by small libraries.\\

Strange that the only specific example she invoked, namely the ubiquitous Best Plays, is precisely one which LC has, since 1920, if one can trust the National Union Catalog, handled as an open-entry serial. H. W. Wilson, whose cataloging aids she consistently recommended for small libraries, has since 1950/51 made separate sets of monographic cards available for each annual volume. It merely confuses the issue further to find that Wilson, like LC, fell back on the open-entry approach to a more recent annual compilation, Dutton's Best Sports Stories. Whatever consistency either organization has observed in treating the many similar annual "Best's" seems largely accidental, although both appear to have resorted to the serial approach in the majority of cases.

II

Since precise instructions for handling serial-edition monographs are unavailable, further search for helpful hints in the AACR and the NUC is our major mode of enlightenment. But LC's notorious droit administratif with regard to certain serial cataloging techniques makes coherent interpretation of precept by practice fortuitous. For instance, a note appended to the final clauses of AACR 6 advises us:

The author of a work issued periodically in revised editions is still considered to be the author even after his connection with the work ceases unless the new editions clearly indicate that the work is no longer his.\\

The example given is J. K. Lasser's Your Income Tax and the point being made is that Jacob Kay Lasser, dead since 1954, should still be accorded a personal author main entry, with added entry under "Lasser (J. K.) Institute." The note, together with its illustration, implicitly repudiates, among other possible solutions, LC's full title main entry for the work. LC meanwhile adopted a corporate main entry for the "companion volume," J. K. Lasser's Your Business Tax, without even a title added entry to file alongside the title main entry of . . . Your Income Tax. Actually, Lasser Institute main entries are now the rule rather than the exception in the LC catalogs. An AACR-fostered concentration on "types of authorship rather than types of works," seems slowly to be developing at LC, in the Lasser case at least, a comprehensible, if locally unauthorized, order out of chaos. Most Lasser publications, both mono-
graphic and serial, are now entered under the corporate name. However, others as late as the 1964 (3d) edition of the *Handbook of Accounting Methods* are entered under Mr. Lasser’s personal name, although the title paragraph on the *Handbook* card admits that it was “edited by J. K. Lasser Institute.” Why was it not cataloged as an open-entry, under either corporate heading or title (granting that its two earlier editions appeared as long ago as 1943 and 1954 respectively)?

There is yet more conflicting evidence to be considered. A recent explication of the AACR suggests:

According to the provisions of rule 6B, the only serials issued by a corporate body that are to be entered under title are periodicals and certain general types, such as directories, biographical dictionaries, yearbooks, etc. All other serials are entered under the name of the corporate body as author, especially those whose title included the name or the abbreviation of the name of the corporate body. Is it legitimate to find in the “serially published bibliography, index, directory, biographical dictionary, almanac, or yearbook” of rule 6B a further specification of those types of works grouped loosely under Chapter 7 (already herein quoted) as “not true serials”? If so, the impression grows that a clearer analysis of the interrelations of concepts, principles and definitions, and the spheres of their interaction and control is imperative.

Of course, there are other criteria which can be invoked. For instance, Hellmut Braun, in discussing chronologically linked multiple authorship before the 1961 International Conference on Cataloguing Principles, insisted that “in all these cases the wording of the title-page is the most important factor.” The possibility of open-entry description apparently modified both AACR and LC attitudes toward the sacrosanctity of title-pages, at least for anything interpreted to fall into that category. Still, whatever adjustment there is or may still be does not save us from the dilemmas of superimposition. LC will retain, we presume, the long established title main entry of J. K. Lasser’s *Your Income Tax*. Perhaps natural attrition, bolstered by increased consistency of added entry work, will some day ease the situation.

Uniformity in serial treatment, if not main entry, has been achieved at LC for ... *Your Income Tax* and ... *Your Business Tax*, plus numerous other publications of the Lasser Institute. Not all, alas. An even more puzzling case than the *Handbook of Accounting Methods* is J. K. Lasser’s *Your Social Security*, cataloged first under personal author, later under corporate entry, for a number of single editions. When its title recently expanded to *Your Social Security and Medicare Guide*, LC repeated monographic cataloging, with no reference to the earlier formats, and with no indication that it had long since acquired a serial nature. Why not slash Gordion knots consistently to locate all such titles under identical entry forms, with the descriptive cataloging handled so as to reduce card proliferation?

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Further search of NUC, together with its predecessor, the Library of Congress Catalog of Printed Cards, turns up other specimens of evolution in handling multiple-edition reference tools. One sequence, fortunately uncomplicated by problems of entry change, is the series of cards for a well-known reference bibliography issued by the Enoch Pratt Free Library. LC cataloged the prototype issue, A Guide to Reference Books, in 1938. Eight years later Reference Books was cataloged with the note: “A complete revision, greatly enlarged, of the library’s A Guide to Reference Books.” Cards for the “2d” (1951) and “3d” (1954) editions changed the history note to read: “First published in 1938 under title: A Guide to Reference Books.” Today the 1954 card, revised for open-entry, starts from the 1947 “1st” edition with no reference to the 1938 format. The AACR says:

The Library of Congress catalogs each serial as a single bibliographical entity, regardless of change of title, issuing body, or name of issuing body. The entry is taken from the latest volume.

In the above case the corporate author main entry was retained during conversion to serial cataloging, but why was not the 1938 work, for which LC once recognized publishing continuity, included in the “single bibliographical entity, regardless of change of title”? We recall that volume numbering became increasingly important in the definitional shift for “serial.” Here it seems to have precluded LC’s single-serial approach to title changes:

The Library of Congress generally catalogs as a single serial the various publications that result from changes of title, or changes in the name of the corporate body under which a serial is entered, so long as the volume numbering is continuous. The entry is normally under the latest title or name of corporate author.

The series of printed cards for The Reader’s Adviser and Bookman’s Manual provide a different picture of LC’s experimentation with descriptive short-cuts for recurrent reference tools. This time we find a final conversion from personal author to latest title entry. After at least seven sets of monographic cards for the first seven editions under personal author entry, with Bookman’s Manual as title, LC now uses a serial main entry under the new title, starting from the 1921 [1st] edition. The original monographic cards are superseded, but remain publicly enshrined in the LC Catalog of Printed Cards and its supplements. The searcher after consistency is thus reminded that until LC’s resort to serial cataloging, Miss Graham’s personal name continued to receive main entry prominence, although Hester Hoffman took over full compiler’s responsibilities for the seventh through the tenth editions (1954 through 1964). Her name was displayed alone on the title-page of at least the last of those editions.

Old sins need not always be tried at the bar of new theory. It is more distressing to discover that the description and entry of two other
much-revised library classics are formulated in a manner contrary to the reasonably happy solution for the Reader's Adviser. We have quoted in part AACR 6, note 11, where there is also a reference to rule 14. Turning dutifully to AACR 14, we find the well-known Guide to Reference Books used twice in different editions to illustrate two complementary situations. Entry is interpreted to hinge on whether the new edition "clearly indicates that the work is no longer that of the original author."21 This time a search of NUC turns up, in contrast to the Bookman's Manual, a progressive entry shift. Five sets of monographic cards ranging from 1902 to 1926 ascribe the first three editions with their revisions to Miss Kroeger, although we are told that she departed this life in 1909. These early editions were all titled Guide to the Study and Use of Reference Books. Three cards published between 1923 and 1936 (with the last subjected to at least three revisions) give main entry for the "fourth" through the sixth editions to Isadore Mudge. The 1923 cards show a title change to New Guide to Reference Books but advise us that it is "Based on the 3d edition of Guide to the Study and Use of Reference Books by Alice Bertha Kroeger as revised by I. G. Mudge." Nowhere is the designation "fourth edition" used, since it was apparently not so identified by the publisher. The 1929 edition was nevertheless called the "fifth" with a still briefer title: "Guide to Reference Books, by Isadore Gilbert Mudge," and a note referring directly to the precedent 1923 edition. Constance Winchell received credit for the seventh and eighth editions.22 Now we learn that there is to be another "original" reviser. Will he too take his place in the company of personal name main entries? It seems to be the presently "approved" way to handle most multiple-edition entries, although one practical theorist expounded the single serial approach for even a large university library catalog a good twelve years before AACR was published.23 It might possibly be objected for this and similar works that the various titles are all, as candidates for main entry, handicapped by their non-distinctiveness. Such an argument did not deter the Harvard catalogers, and just possibly what's good for Harvard might be good for the country! Certainly LC's more heterodox, bibliographically less precise Reader's Adviser solution seems preferable.

A related question concerns the nine editions of Sears List of Subject Headings, for which LC uses still another way out. A similar multiplicity of editors, variously memorialized on the successive title pages, were uniformly subordinated to the original compiler. "Sears, Minnie Earl" appears as main entry on the full sequence of nine monographic cards, in spite of the fact that she has had no calculable effect on the List's development since its 1933 third edition. There is one further precept in AACR which has bearing on such decisions. Rule 4A accords main entry to an editor provided:

\[\text{... 1) he is named on the title page of the work, 2) the publisher is not named in the title, and 3) the editor appears to be primarily responsible for the existence of the work.}\]
The last of these three conditions, reiterated in rules 6 and 14, is patently ambiguous, as the handling of the above examples demonstrates. The antithetical illustrations for AACR 4, furthermore, include two taken from different editions of the Directory of American Scholars, originally edited by Jaques Cattell. The whole rule and its examples, considered together with the general intent of rule 6 and established LC practice, as quoted from Chapter 7, shows a clear movement toward title main entry for all types of continuations. A quick review of LC work reveals that serial title main entry is precisely what was adopted after the first two editions of the Directory of American Scholars had been cataloged monographically. Similarly American Men of Science, though not cited as an AACR illustration, was accorded title main entry serial treatment after the first, plus five subsequent, editions were separately cataloged under the editor, James McKeen Cattell.

IV

It is tempting to cite other examples, all illuminating in different degrees, as treated individually under old and existing rules, but incoherent when collectively studied from any morphological point of view. The cases already reviewed, illustrating the characteristic difficulties encountered, need not be tediously multiplied. Only one further type is persistent, and therefore merits brief consideration. A general encyclopedia set or dictionary usually receives title main entry, though the NUC reminds us that Noah Webster as late as 1957 received gratuitous credit for certain of the recent Merriam-Webster publications. The logical next step in the evolution of such entries toward serial cataloging has seldom been taken.

To name but one signal case, the Encyclopaedia Britannica was cataloged (judging from the NUC) at least nineteen times for various editions or issues, up to and including the thirteenth. There may be justification by reason of historical interest for the monographic treatment of those early editions. The fourteenth, which first appeared in 1929 with a new policy of continuous revision, seems different. LC nevertheless continues to give full monographic treatment to each annual issue, with at least thirty-six cards painstakingly tailored to successive issues, through that of 1969. These cards, meticulous as they are, usually add nothing of real value to our bibliographic knowledge. Why not convert to a single “fourteenth” edition open entry?

It may be argued that the multiple-volume format of each set, plus the fact that most libraries seldom keep any one issue for more than five or six years, injects a descriptive complication into the picture. For the American Men of Science, however, as for other common serial sets, these reservations did not prove insurmountable. Why should the risks of inconsistent added-entry work, so evident upon close comparison of most successive-edition monographic cards, be run when the result dooms much catalog filing and searching to embarrassment?
The Library of Congress, predictably unpredictable, after issuing twenty sets of cards for various editions and issues of the *Encyclopaedia Britannica World Atlas*, converted to serial description, beginning with the original 1942 issue. Neither edition numbers nor any other item in the volumes indicated a publication change, or anything more than inductive reasoning as the basis for the revised treatment.

All of the major encyclopedias are cataloged monographically by LC. The *Encyclopedia Americana* has received an even more constipating array of parallel entries, because of its dual appearance from 1949 to 1963 in a Canadian as well as a U. S. format. Monographic description of the contemporary "international edition" is available as recently as 1968, climaxing a foliation of some sixty-nine card sets since the first issue was cataloged in 1902.

V

The major objects of this analysis have been to document the following propositions:

1) that any extended effort to apply the basic rules of the present code to the realities of book production show the AACR, in spite of progress toward structural unity, to be fragmented, particularly in its equivocations over a practical distinction between monographic edition and serial edition publications, and

2) that as chief originator of currently accepted modes of description, LC has done little, either by explication or precept, to smooth the path of understanding and emulation in the thousands of catalog offices over the country.

Is there anything logical yet practicable which can be done? The result of these portentous inconsistencies has been a gradual falling from grace in the library pecking order. Librarians divide into the many abjurers versus the root-bound few. The distressed cataloger becomes either a pedant or a skeptic, a sterile legalist or an irresponsible pragmatist. Our catalogs are stocked with filing errors and descriptive inconsistencies, turning our patrons into disgruntled shelf-browsers.

While there is no easy or obvious answer, either for cataloging in general or for the specific kinds of dislocations discussed here, there are surely methods of attack which, if properly executed, can provide workable solutions. Some light might be shed on present problems, for instance, by thoughtful review and definition of the multiple-edition concept. Whether arbitrary quantitative measures (e.g., "once every two [three] years" or "two [three] consecutive revisions within five [ten] years") would solve present serial ambiguities needs further discussion. Perhaps a more qualitative approach, such as "reference or fact books with a history of two or more fully responsible author/editors" could be adopted, either by itself or in conjunction with the quantitative designation.

However the formal problem of definition is handled, the advantages
of group description for the typical continuous-revision-plan reference tools seem to this writer to outweigh those of bibliographic nicety. Even the obscure hints in our code and the incongruities of our largest supplier of de facto card copy show, almost in spite of themselves, significant moves in that direction. Open-entry serial cataloging, preponderantly by latest title, will surely become more evident in our catalogs of the future. We should take immediate steps to keep the idiosyncratic and arbitrary factors within a presently fluid context from proliferating or rigidifying. Only then will we be free to control the tendency for our own best development.

REFERENCES
5. AACR, p. 191.
6. Ibid., p. 231.
10. AACR, p. 22.
13. Cf. LC cards no. 64-22385, 43-15681, 54-10976, under entry: Lasser, Jacob Kay.
16. Cf. e.g., LC cards no. 49-11525, 59-970, 66-21820, under entries: Lasser, Jacob Kay; and Lasser (J.K.) Institute, New York.
18. AACR, loc. cit.
20. Cf. e.g., LC cards no. 21-14572, 54-8580, 57-19277rev3, under entries: Graham, Bes- sic; and The Reader’s adviser.
22. Cf. e.g., LC cards no. 2-25789, 23-4790, 51-11157 (later 51-11157rev4), under entries: Kroeger, Alice Bertha; Mudge, Isadore Gilbert; and Winchell, Constance Mabel.
24. AACR, p. 17.
26. Cf. e.g., LC cards no. 6-7326, 38-16980, 6-7326rev2, under entries: Cattell, James McKeen; and American men of science.
27. Cf. e.g., LC cards no. Map 43-1, Map 57-269, Map 57-269rev, and Map 68-878, under corporate author entry: The Encyclopaedia Britannica.
Neither Book nor Manuscript: Some Special Collections

EVERT VOLKERSZ
Special Collections Librarian
State University of New York at Stony Brook
(Formerly of the Department of Special Collections
University of California Library, Los Angeles)

Cataloging, classification, and filing innovations have proven successful in achieving bibliographic control over American almanacs, ephemera, objects, pamphlets, pictorial, rare map, and scrapbook collections in the Department of Special Collections of the University of California Library, Los Angeles. Comments are made on the research potentials of these unusual materials, especially in relationship to the book and manuscript holdings of the Department of Special Collections.

AMERICAN ALMANACS, ephemera, objects, pamphlets, pictorial collections, rare maps, and scrapbooks form an important part of the research collections developed by the Department of Special Collections of the University of California Library, Los Angeles. These unusual collections constitute an important source for research, complement the book and manuscript collections, and support the teaching functions of the University. New materials, whether gift, purchase, or uncataloged backlog, are carefully scrutinized before incorporation into the collections to prevent the danger of building up a museum collection.

Before describing the nature and organization of these diverse collections, the purposes of the two public card catalogs and the cataloging practices of the Department of Special Collections require explanation. This is especially necessary because the departmental stacks are closed to the public, and cataloging and classification adaptations have been made to accommodate these unusual special collections.

The Printed Books Catalog

The Printed Books Catalog records the book, pamphlet, and almanac holdings of the Department of Special Collections. Duplicate sets of cards for the book collections are maintained in the Department and in the public catalog of the University Research Library. Books generally receive the same descriptive and subject cataloging and classification as the books for the library's general collections. Special contents and bibliographic notes are provided only for a limited number of books and book collections of special interest. Classification exceptions are made in a number of instances to keep certain author and subject collections...
together. This includes, for example, collections of printers and publishers, illustrators, and various historical materials. The advantages of such classification exceptions are in shelving the collections and the use of the shelflists as bibliographic and reference tools. Author and subject collections which have been given "artificial" (i.e., fixed) LC classifications by the rare books catalogers include Bodoni imprints, incunabula, avant-garde literature, Henry Miller, Negro literature, and the Rex Whistler collections, among many others. Cutter numbers for these collections are occasionally adapted to allow for special shelf arrangements.

An earlier classification system, in which the LC classification was replaced by the name of the collection (e.g., Children's Books, Emerson, Dreiser, Rimbaud, Spinoza collections), was discontinued many years ago. The Cutter number served as the actual shelf number. This adaptation turned out to be an impractical shelf and shelflist arrangement. It required separate shelving for these collections, leading to location and multiple shelflist problems. Experience has proven that it is simpler to use a single continuous and expandable alphabet for all book collections. The classification of the Michael Sadleir Collection of Nineteenth Century Fiction is an exception. Although it has been cataloged following standard UCLA practices, the call number consists of the number in Michael Sadleir's *XIX Century Fiction*.

The Numbered Collections Catalog

The Numbered Collections Catalog evolved out of the need to maintain bibliographic control over the manuscript and other non-book collections. Descriptive and subject cataloging rules are followed as closely as practicable for these materials. However, instead of assigning an LC classification number, collections are given a fixed shelf number in sequence of cataloging. Additional subject headings and added entries compensate for the absence of manuscript classification.

When a manuscript collection occupies less space than a document box, it is cataloged in the Miscellaneous Manuscripts Collection. After one document box is filled, the procedure is repeated with a next one. These miscellaneous manuscripts are filed alphabetically by entry within each box, and the call number indicates the collection number (100), and the box number.

The main and shelflist cards are typed out in full for manuscript collections which require only a few added entries and subject headings. For example:

989 Cray, Ed
   Papers. Los Angeles, 1966-
   bxs

A register of the collection
is in the Collections File.

The number of document boxes in the collection is penciled in to allow

* 494 *
for additions. The tracings are typed on the back of the shelflist card. In this example they are: 1. Police—Los Angeles. 2. Liberty. I. American Civil Liberties Union of Southern California. Instead of typing full cards for these, an abbreviated form is used, which has proven to be quite useful. The first subject heading card looks as follows (subject headings in red on the actual cards):

Police—Los Angeles
See the following entry in this catalog
Cray, Ed Papers. Los Angeles, 1966-

Only an original card is typed when a large number of added entries and subject headings are to be made. The original is reproduced mechanically for the desired quantity. The following card is an example:

285 Edson, Katherine Philips, 1870-1933.
   Papers, 1909-1934.
   9 boxes.
   Correspondence, pamphlets, clippings, and memorabilia concerning:
   women in industry...
   An indexed guide to the collection is in the Collections File.
   Gift of Katherine Edson Mershon, March 9, 1945.

The index of the guide or register, which is kept in the Collections File in the Departmental office, is often used to list the tracings.

To facilitate cataloging ephemera, pictorial, and other collections, form cards have been multilithed. Following are a few examples:

99 Picture Collection
200 California Ephemera Collection
2000 Graphic Arts Ephemera Collection

The entry is typed above the name of the ephemera collection as an added entry or subject heading. One card is made for the Numbered Collections Catalog and one for the shelflist. Additional cards are rarely needed for these vertical file collections, because the subject matter of each folder is quite limited.

The shelflists for these collections are very effective bibliographic tools. Patrons interested in specialized subject areas can search through the shelflist. This will be clarified in later discussions of specific collections.

Standard forms have been developed to record Department of Special Collections materials in the University Research Library public catalog. The following form is used for manuscript materials:

For correspondence and papers under this heading, consult the Numbered Collections Catalog, Department of Special Collections.
Oral history typescripts are reported as follows:

For a typed transcript of a tape recorded interview under this heading, consult the Numbered Collections Catalog, Department of Special Collections.

Other material, which are neither books nor manuscripts, are listed:

For additional material under this heading, consult the Numbered Collections Catalog, Department of Special Collections.

Although their classifications differ, American almanac and pamphlet holdings are recorded in the Printed Books Catalog. The following form is used to report almanac titles in the University Research Library public catalog:

For holdings see the Catalog in the Department of Special Collections. Due to the fragility of these materials, their use is limited to research.

American almanacs have been assigned the “artificial” classification AY 50. Cutter numbers are taken from the title or entry, and the shelf-list is in Cutter number (i.e., alphabetically by title) order. Pamphlet collections are Numbered Collections, e.g., the Southern California Imprints Collection is Collection 1600, the British Pamphlet Collection is Collection 1800. For classification purposes, the date of the imprint is added to this Collection number, and a sequence number within the date is added. For example:

1600/ 1897/ 5
Yates, Mary M B
Ideals of the immane
love, by Hope Haywood [pseud.]
Los Angeles, Commercial Printing
House, 1897.
164 p.

This is the fifth book cataloged with an 1897 imprint in the Southern California Imprints Collection.

Cataloging and classification procedures for the scrapbook, photograph album, and objects collections are essentially the same as those for the Miscellaneous Manuscripts Collection. A collection number is assigned, and when there is more than one item to a document box, oversize package, or album, a sequence number is added. The following item is an example of this:

150 Scrimshaw. n.p., n.d.
bx.15 1 item. 9½cm.
       A whale’s tooth engraved with the
       figures of two children in 19th cen-
       tury clothes.
       Ex libris: Mrs. Elvah J. Karshner

Library Resources & Technical Services
The actual box number, 15 above, is usually penciled in to allow for changes and additions.

Flat rare map cataloging has taken two forms. Until recently maps were cataloged fully according to LC rules and classifications. Lack of time and space have forced alterations. Rare flat maps have been made a Numbered Collection, and sequence numbers are now assigned to flat maps regardless of the geographical area covered. Additional subject cataloging is done to allow for this change. Rare pamphlet maps have been treated as boxed Numbered Collections. For example:

931 Stuart de Rothesay, Charles Stuart, baron, 1779-1845, collector.
Collection of maps, v.p. ca. 1715-1840. 56 bxs. (ca. 530 maps)

All maps in this collection were listed with separate indexes for map makers, geographical locations, and publication dates. Tracings were made for map makers and locations. The virtues of this approach are to provide bibliographic control and to make the maps publicly available.

American Almanacs

The American Almanacs collection chiefly includes almanacs published in the eighteenth and nineteenth centuries. Famous titles, such as Farmer's Almanac, many variants of Hutching's Almanac, and Bickerstaff's New England Almanac are included, as well as illustrious astronomers Thomas Spofford, Andrew Beers, and Nathan and Ernest Daboll.

The almanac collection has served a wide variety of research needs. The anecdotes, medical and farm advice, and business commentary have been examined by folklorists. Early American printing and publishing history has been investigated, and literary and social historians have encountered unusual source materials in these enchanting publications. Marginal notes by former owners and illustrations by (their?) children add to their interest and charm.

The collection has been cataloged alphabetically by title, and whenever possible within publisher's or editor's series. This cataloging approach preceded the publication of Milton Drake's Almanacs of the United States, which lists almanacs alphabetically within year of publication. It provides a very useful source for bibliographic identification and cross-checking purposes, and serves as a temporary catalog.

Ephemera Collections

The ephemera collections consist of legal size file folders housed in vertical file cabinets. Each folder is represented by a card in the Numbered Collections Catalog and the shelflist. All ephemera collections and shelflists are filed alphabetically.

The California and U. S. Ephemera Collections contain broadsides, clippings, brochures, and other ephemeral materials. The California
Ephemera Collection supplements the extensive Californiana book and historical manuscript collections in the Department. The U.S. Ephemera Collection is of a more general nature. Both of these collections provide introductory research materials for undergraduate students, often satisfying their needs.

The Miscellaneous Ephemera Collection consists of broadsides, clippings, brochures, and related ephemeral materials relating to collections in the Department not covered by other ephemera collections. It serves primarily as an adjunct to the literary manuscript collections, and consequently is not used to file odds and ends indiscriminately.

The Collection of the Literature of Extremist Movements brings broadsides, brochures, clippings, and ephemeral materials together, published by the widest possible spectrum of social, religious, economic, political, and other dissenting organizations in the United States. The materials in this collection are presently entered in the catalog by issuing agency or organization, with a few author and subject entries. A separate geographical location index has been prepared to study radical movements by area.

The usefulness of the wide coverage of this collection has already been proven by its frequent use. Research on obscure pamphlets and broadsides in this and related collections going back to the 1930's and earlier have justified this collection. It should be noted that not all organizations represented were or are extremist. The deciding factor is that these organizations have taken positions to the left and right of the Republican and Democratic Parties.

Historical and critical materials about the moving picture industry are collected in the Harold Leonard Film Collection. It is composed of clippings, ephemera, stills, pamphlets, film catalogs, study guides, reference notes to film periodicals, and similar materials. The original materials which formed this collection came from the files of film critic and historian Harold Leonard, who used much of it in editing The Film Index. This collection complements the book, serial, and extensive manuscript holdings in the Department of Special Collections on the film industry in and outside of Hollywood.

Closely related is the Theater Arts Ephemera Collection. In these files are clippings and ephemera reflecting the history of the stage in the United States and Great Britain. This collection supplements considerable theater history holdings in the Department and the Theater Arts Library.

A small Graphic Arts Ephemera Collection was recently added, including materials about the history of printing and typography, bookbinding, papermaking, book-trade and publishing, book and printers' clubs, fine printing, and private presses. This collection supplements the printing collections, such as the Bodoni, William Pickering, Aldus Manutius, and California press collections.

The shelflist for each one of these ephemera collections constitutes a unique reference tool. Students of California history often discover
unusual items by browsing through the California Ephemera Collection shelflist. Research in film history can often be rewarding, for example, by showing patrons the shelflist of the Harold Leonard Film Collection.

Objects Collection

The Objects Collection contains non-paper items relevant to the collections in the Department of Special Collections. It is definitely not a museum collection. Clay tablets, a paper fan, a papyrus fragment, wood blocks, a small bust, animated pictures, a peep show, lithographic stones, and glass-slide projectors are among the cataloged objects. These are effective exhibit and research pieces. These objects do not include the few personal firearms and ceremonial appurtenances which came with several manuscript collections.

Pamphlets

The Southern California Imprints Collection consists of books and pamphlets printed or published in Southern California, and not sufficiently interesting or important to be included in the cataloged library collections. This collection reflects the widely divergent religious, philosophical, social, and political activities of Southern Californians. Titles on palmistry, health and miracle cures, and metaphysical organizations abound. In addition, there are vanity publications of poetry, travel books, and Hollywood histories. It is a rich source for the study of Los Angeles subcultures and publishing history. A bibliography on metaphysical cultism was based on this collection.4

Cards for this collection are filed by author in the Printed Books Catalog and by year in the shelflist. Extra shelflist cards are supplied for locally printed titles located in the regular collections of the Department of Special Collections and the University Research Library. These extra shelflist cards are filed alphabetically by year preceding the numbered Southern California imprints.

The Southern California Serials Collection includes magazines, journals, bulletins, announcements, catalogs, programs, and calendars printed and published in Southern California. Cards are filed by main entry only (usually the title) in the Printed Books Catalog, and by Cutter number in the shelflist. This shelflist comprises a virtual mini-union list of Southern California serials.

Directories of local organizations, business, recreational groups, women's clubs and churches are brought together in the Southern California Directory Collection. However, since many local directories are extremely valuable for historical research, most of them have been cataloged for the book collections. Consequently, the local directory collection is rather small.

Acting editions of English language plays, primarily nineteenth century, are grouped in the Play Collection. The present arrangement consists of separate author and title indexes. This collection has proven
to be an interesting complement to the extensive holdings of nineteenth century literature in the Department.

The U. S. Pamphlet Collection contains eighteenth and nineteenth century political, religious, and economic pamphlets published in the United States. It includes pamphlets concerning the Jacksonian period, the Civil War and Reconstruction, and other titles reflecting American historical problems. July Fourth and Thanksgiving orations by preachers and politicians are a very common feature.

Cards for this collection are filed by author or title in the Printed Books Catalog and by date in the shelflist. This chronological shelflist arrangement provides a subject approach and a major means of access to the collection, because researchers are frequently interested in a limited period, and publications for specific years of interest can easily be reviewed.

Political, social, religious, and economic pamphlets, tirades, and polemical writings form the substance of the eighteenth and nineteenth centuries British Pamphlet Collection. Cards are filed in the same way as the U. S. Pamphlet Collection.

In the future the Department expects to catalog the U. S., British Pamphlet, and the Play Collections in the regular book collections, maintaining chronological indexes which have proven useful.

Pictorial Collections

There are two vertical file picture collections in the Department. The Picture Collection is a general collection of photographs of persons and places, intended as a useful supplement to other collections. The Theater Arts Picture Collection contains photographs of stage actors, actresses, and theaters. Portraits are entered under the name of the individual (i.e., Friganza, Trixie, 1870-1955—Portrait). Subject entries are primarily by geographical location (i.e., Los Angeles—Views), or the specific name.

The Photographers Collection has a sampling of the works of numerous photographers, including Edward Weston, Berenice Abbott, Ansel Adams, and Eadweard Muybridge, as well as a number of local photographers. Boxed and bound sets of photographs, too bulky to be located with the Picture Collection, and unique albums form the Photograph Album Collection. These pictorial collections supplement and extend the large history of photography collection now in the Department of Special Collections.

Rare Maps

Rare flat maps and pamphlet maps dating from the late seventeenth through the nineteenth century have been collected by the Department. Among these are historical maps of the American Southwest, California state, county, and city maps, with a specific interest in Los Angeles maps before 1900. There are also many outstanding maps of America and Europe.
Scrapbooks

Scrapbooks are unusual items, relics of the times before television, when people still clipped newspapers, collected trade cards and cigar bands, cut up eighteenth century books for pictures of English buildings and scenery, honored William Shakespeare's memory with a scrapbook of clippings and ephemera, or interspersed quotations, clippings, and aphorisms with painted or gummed flowers and sentimental rhymes. The Scrapbook Collection reflects personal tastes and interests of usually long-forgotten boys and girls, men and women.

Other collections which could have been mentioned include ballads, broadsides, caricatures and cartoons, little (literary) magazines, and poster collections. With the American almanacs, ephemera, objects, pamphlet, pictorial, rare maps, and scrapbooks collections they constitute one segment of the collections in the Department of Special Collections.

Recent acquisitions, new collections, and exhibits based on collections are frequently reported in the UCLA Librarian. Although there is no current guide available to the holdings of the Department of Special Collections, many are recorded in such listings as Lee Ash's Subject Collections, the National Union Catalog of Manuscript Collections, and American Literary Manuscripts published by the Modern Language Association of America.5

REFERENCES

5. Personal inquiries concerning collections may be directed to Wilbur J. Smith, Head, Department of Special Collections; to the Literary Manuscripts Librarian, Brooke Whiting; to the Historical Manuscripts Librarian, Sandra B. Taylor; and to the Director of Oral History and University Archivist, James V. Mink. I am indebted to these colleagues for their assistance in the preparation of this article.

Publications reflecting collections in the Department of Special Collections are available from the Gifts and Exchange Section, University Library, University of California, Los Angeles, California 90024.
The Visible Index Method of Cataloging Phonorecords

JOHN T. CAREY
Assistant Regional Administrator
Springfield City Library
Springfield, Massachusetts

The phonorecord cataloging system of the Springfield (Mass.) City Library is discussed, with emphasis on its economy and popularity, strengths and weaknesses. Examples of the visible index, shelflist, and song title index entries are given for one popular and two classical records. The system is recommended for small and medium-sized public libraries, school libraries, and some academic libraries.

Most small and medium-sized libraries have experienced a crisis of some sort, perhaps the retirement of the record cataloger or a budgetary reduction, which has caused librarians to wonder whether the card catalog for phonograph records, while a fine reference tool, may be too detailed for most borrowers' needs and an unnecessary burden on the library.

The Springfield (Mass.) City Library met such a crisis some years ago with the retirement of an employee who had done the record cataloging for many years. No one in the fine arts department was prepared by training or experience to take her place, the library's cataloging department could not take on the work, and the salary available for the vacant position was not sufficient to attract trained personnel. Faced with these unpleasant realities, a decision was made to look for a different cataloging system which could easily be learned by a clerical person trained on the job, would be inexpensive, and would satisfy the majority of the patrons without being too detailed.

Two members of the library staff traveled to many libraries and library supply houses looking for ideas, and returned with a Rand visible index as the basic information storage device to replace the card catalog. This, with the shelflist and song title index on cards, formed the new record cataloging system at the library, which now has 4,500 records.

The visible index is a large circular unit with many metal leaves, mounted on a stand about four feet tall. The entire index section rotates so that a person can examine the whole file without moving from one spot to another. Because of its circular shape, it can also be used conveniently by several persons at a time. Entries are typed on narrow strips of cardboard, which are covered with colored plastic overlays and...
inserted in the metal leaves. The cardboard strips can easily be moved to allow interfileing of new entries.

The overall organization of the visible index comprises four sections identified by different color plastic overlays. The white section is for entries under the name of the composer; yellow indicates the section for entries under instrument, sub-arranged by the instrumentalist; blue denotes the vocalist section, alphabetically arranged by the individual artist or group. The fourth section, identified by rose colored overlays, has entries by type or subject, as follows: Ballet, Chamber Music, Children, Christmas, Circus Music, Comedy, Dancing, Electronic Music, Folk Dance, History, History of Music, Jazz, Language Instruction, Miscellaneous, Movies and Musicals, Music of Different Countries (alphabetized by country), National Anthems, Negro Culture, Operas, Plays, Poetry, Religious, Shorthand Instruction, Sound Effects, Speeches and Lectures, Spirituals, Square Dances, Stories, Talking Books, Typing, and Wedding Music.

The following illustrates the organization of the visible index, as viewed from above:

![Diagram of index organization]

Perhaps the system can best be explained in detail by following several records through processing. Let us say, first, that the Turnabout recording of the Copenhagen String Quartet playing Sibelius' *String Quartet in D Minor* and Berwald's *String Quartet No. 2 in A Minor* is being cataloged. A single shelflist card is prepared, showing both works on the record. After purchase price, date and other internal business notations are added, entries for the visible index are traced. Strips are then typed, as follows, for filing in the composer (white) section and under the chamber music heading in the rose section. Letters and numbers to the left of the entry are the location (manufacturers') numbers.
BERWALD, FRANZ
TV 34091 Quartet No. 2 in A Minor. Copenhagen String Quartet

SIBELIUS, JEAN
TV 34091 Quartet in D Minor Op. 56. Copenhagen String Quartet

CHAMBER MUSIC
TV 34091 Berwald. Quartet No. 2 in A Minor. Copenhagen String Quartet
TV 34091 Sibelius. Quartet in D Minor Op. 56. Copenhagen String Quartet

As a second example, let us take the Angel recording of Hugo Wolf's Spanisches Liederbuch, with Dietrich Fischer-Dieskau, baritone, and Gerald Moore, piano. In addition to the shelflist card and entries in the visible index, entries are made in the song title index on cards.

504 Library Resources & Technical Services
Wolf, Hugo

From the Spanish song book
Angel, 12 in. LP (1 rec., pam.)
(Dietrich Fischer-Dieskau, baritone;
Gerald Moore, piano)

Contents: - Nun bin ich dein.-Dei Gott
geparst.-Nun wandre, Maria.-Führ' mich,
Kind.-Ach, des Knaben Augen.-Ach, wie lang
die Seele.-Herr was trägt der Boden hier.-
Seltsam ist Juanas Weise.-Treibe nur mit
Lieben Spott.-Auf dem grünen Balkon.
(continued on next card)

Contents continued: - Und schlafst du.-
Wenn du zu den Blumen gehst.-Wer sein holdes
Lieb.-Ich fuhr über Meer.-Deine Mutter.-
Herz, verzage nicht geschwind.-Ach, im Maien
war's.-Alle gingen, Herz.-Derenst, dereinst.-
Blindes Schauen.-Komm' o Tod.-Tief im Herzen
trag' ich Pein.-Da nur Leid und Leidenschaft.

4. Vocalist

WOLF, HUGO

35838 Spanisches Liederbuch. Fischer-Dieskau. Moore, piano
As a final example, let us consider the recording "Frankie Laine Sings His All-Time Favorites." A shelflist card is made, plus entries in the vocalist section and song title index. Note that, as a card has previously been established for a song title, the location number of the recording at hand is added to that card, rather than making a new card. In this case, there were three other records in the collection with "When You're Smiling."

Obviously, the thrust of the system is record location, and not reference use, since very little information about a record is given in the visible index or song title index other than location number. It has been observed by the library staff that this information, however, is enough to satisfy the great majority of patrons, who want only to find a record by their favorite vocalist, composer, etc., and to take it home. If a record is out, they do not seek detailed information about it. For the few who do need detailed information, the system does yield it through the
Laine, Frankie
Frankie Laine sings his all-time favorites.

Wing, 12 in. LP (1 rec.)

Contents:
- When you're smiling
- Carry me back to old Virginny
- God bless the child
- May the good Lord bless and keep you
- Swamp girl
- Wrap your troubles in dreams
- At the end of the road
- Rockin' chair
- Shine
- Metro polka
- Rosetta

1. STI 2. Vocalist
two step approach. First the location numbers for the records in question are found using the indexes, and then the shelflist is consulted by using the location number to retrieve the proper card. There are also reference materials available for handling requests, including the One Spot and Schwann Catalogs, and the Library of Congress Catalog: Music and Phonorecords.

A core of experienced staff who have been with the library for a number of years are convinced that, on the whole, the visible index system for cataloging phonorecords has been both economical and popular. As for economy, it seems clear that typing one card (or using LC copy) for the shelflist, and typing a few short headings on cardboard strips for the visible index is much faster than producing a whole set of cards, and is cheaper. Filing is very simple, easily revised, and the whole cataloging process is quickly finished. Records can be circulated soon after purchase, and song title index cards can be typed from the contents sections of the shelflist cards while the records themselves are in circulation.

Patrons of the City Library use the visible index much more than they ever used the card catalog for records, and, so far as can be determined, have a reasonably high degree of success in finding what they seek. The song title index is used chiefly by the staff in response to a patron’s request for information, and is just as useful an adjunct to the visible index as it was to the card catalog. It seems that the very lack of detailed information in the cataloging system, which might be considered a weakness, actually strengthens its popularity in that the abbreviated format makes the initial location of the desired entry much simpler. Patrons and staff like the possibility of seeing at a glance the whole arrangement of entries under the composer, vocalist, instrument or form, without being obliged to examine card after card and go from drawer to drawer. The leaves can display more than eighty entries on each side; examining a side is equivalent to studying eighty catalog cards.

It must be admitted that the system, as it is now constituted, lacks some approaches which could be considered important. There is, for example, no reference structure, and a person who knows a work only by title must determine the composer or type of music before using the visible index. One cannot find entries together in one place for all records in the collection conducted, say, by Carmen Dragon, since there is no conductor entry section in the visible index. Nor can one find the desired classical work by entries under the name of the orchestra. It would, of course, be possible to start sections for entries under orchestra or conductor. They have not been added because there does not seem to be enough demand for these access points to merit the work which would be involved in establishing them, and because there is reason to believe that incorporation of these approaches would detract from the simplicity of the visible index, and hence from its overall effectiveness.

Other problems concern the headings in the rose section, not all of
which have been successful in organizing entries effectively. It has been suggested, for example, that there should be a separate heading for spoken records, so as to make their location more efficient. At present, entries for spoken records are scattered under several headings, including Comedy, History, Language Instruction, Miscellaneous, Plays, Poetry, Speeches, and Stories. One heading for all spoken records, with entries arranged alphabetically by title in one list or in a few subdivisions, would be preferable. This would lessen the amount of knowledge about the contents of a record one would require before using the visible index.

It must also be admitted that while the system is well able to handle classical records, it is not always able to handle popular records satisfactorily at the present time. For example, many patrons have difficulty finding the entries for records by Herb Alpert's Tijuana Brass, a very noticeable deficiency since these records are in heavy demand. They are entered in the instrument (yellow) section under the heading "Orchestras, popular," an unsatisfactory arrangement. Rock groups such as The Moby Grape, The Doors, and The Jefferson Airplane are found entered in the vocalist (blue) section, while other popular singing groups, such as Peter, Paul, and Mary, are found in the rose section under the heading "Music of Different Countries—US—Individual Artists," presumably because of their folk orientation. It is often difficult to determine whether a group has been considered folk or rock, and when it comes to that genre known as folk rock. . . .

Changes in modern music of the popular variety have come faster and have been more drastic than anticipated at the time when the

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headings in the rose and other sections were established. The visible index is a flexible tool, however, and is also capable of change. The library staff is now working on a revision of the rose section, including a consolidation of many of the different headings for spoken records, and is establishing a separate section for popular music records. The staff is optimistic that a satisfactory scheme can be worked out, one that can handle successfully entries for all kinds of records.

In closing, it would seem fair to say that the visible index, with a shelflist and possibly a song title index, forms a system which has real merit for cataloging the record collections of small and medium-sized public libraries, school libraries, and academic libraries not requiring cataloging in depth.
An Expandable Classification Scheme for Phonorecord Libraries

DON PHILLIPS, Music Librarian
The Swen Franklin Parson Library
Northern Illinois University
De Kalb, Illinois

A summary of criticisms of classification systems for phonorecords precedes a description of services and the classification system of Fouser Music Room in Northern Illinois University Library. In addition to call numbers derived for composers, call numbers are provided for types of music on discs containing more than one composer, which avoids a large miscellaneous section. Catalog copy is obtained from various sources.

THERE IS NO DOUBT that recordings are here to stay in libraries. They will also, no doubt, remain as monophonic, stereophonic, tape, and cassette resources. Stereophonic recordings and equipment are replacing monophonic discs, but tape recordings and cassettes are also making rapid headway. The introduction of recorded discs and tapes—musical and spoken—is a valuable asset to library patrons; however, the classification and cataloging of their contents continues to pose problems for librarians.

In two previous articles Christopher Barnes¹ and Gordon Stevenson² noted that eight separate classification schemes exist for record collections. Periodical literature has exposed all the problems that a librarian inherits with the implementation of a record collection for patron use. Several writers advocate a Dewey Decimal classification for recordings. Some insist upon an accession number scheme. Others are convinced that a mnemonic scheme is the best. All agree that the largest single problem is the recording of more than one composition on a disc, often by more than one composer.

Criticisms of the various classification systems include lack of access for browsing, the fact that a composer's works are not together, that a patron cannot bypass the card catalog, that music forms are not together, that miscellaneous sections are too large, that re-shelving is

difficult, and that expansion of the scheme is not possible.3

The one problem that will never be solved by a classification scheme is the appearance of multiple compositions by more than one composer on a single disc. The only solution is separate main entries for the more important works and analytics for smaller pieces such as songs.

The classification scheme at Northern Illinois University refutes most of the other of the above criticisms. The library has a circulating collection of more than 6,000 records which is being expanded to include tape recordings. Stereophonic and monophonic discs are interfiled. The records are in open stacks for browsing and are under limited control. It is a significant compliment to the student body that loss of records and damage to single items is small.

The collection began as a recreational collection but has become a source which supports the varied needs of a growing music department. The services of the music library are directed toward research needs of students and support of specific music courses. Catalogs of types of recorded music are developing in Renaissance and American music, and Afro-American music, as well as for recordings of seasonal interest such as Christmas and Easter.

Sister Mary Alvina4 wants to keep works of one type together. On the other hand, it is well to keep all of a composer's works of one type together. Our classification scheme keeps a composer's works together as well as providing that all separate types of compositions by that composer are filed side by side in proper order.

Gordon Stevenson5 feels that a patron should not have to consult the catalog each time he wishes to locate an album, which process would be necessary if the accession number or the manufacturer's number were used as a classification scheme. After the first use of the Northern Illinois University Collection, most compositions can be located without resorting to the catalog.

The initial step in classification is begun by using the Cutter-Sanborn Three-Figure Author Table. A Cutter number is selected for the surname of the composer of the music recorded, or, if more than one composer is featured, the composer most prominently featured. This choice is open to the cataloger. If another record is purchased containing a recording of two composers, one of them being the same composer with the same selection recorded on the first disc but less prominently featured, this disc may be classified by the first composer, retaining the same titles in one location. However, at the discretion of the cataloger, the second

3 Jean Hitchon, "Record Libraries," Assistant Librarian, 38 (August 1965), 166.
Sister Mary Alvin, CDP, "La Roche College Classification System for Phonorecords." Library Resources & Technical Services, 9 (Fall 1965), 443.
4 Alvin, loc. cit.
5 Stevenson, op. cit., p. 3792.

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composer may be used for classification and an added entry made for the previous music title.

The call number is made up of:

1. Cutter number
2. Form letter or letters indicating form of compositions (symphony, concerto), instrumentation, number, opus number, period or title, as the case may be.6

**EXAMPLES:**

<table>
<thead>
<tr>
<th>Call Number</th>
<th>Composer</th>
<th>Type</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>B813sy2</td>
<td>Brahms</td>
<td>symphony</td>
<td>[form] number</td>
</tr>
<tr>
<td>sy2</td>
<td></td>
<td>number</td>
<td></td>
</tr>
<tr>
<td>B415coP5</td>
<td>Beethoven</td>
<td>concerto</td>
<td>[form] [instrumentation]</td>
</tr>
<tr>
<td>coP5</td>
<td></td>
<td>number</td>
<td></td>
</tr>
<tr>
<td>H415qS76/1</td>
<td>Haydn</td>
<td>quartet</td>
<td>[form] [instrumentation]</td>
</tr>
<tr>
<td>H415q</td>
<td></td>
<td>string</td>
<td>op. 76, no. 1</td>
</tr>
<tr>
<td>V484oD</td>
<td>Verdi</td>
<td>opera</td>
<td>[form] [title]</td>
</tr>
<tr>
<td>V484o</td>
<td></td>
<td>Don Carlos</td>
<td></td>
</tr>
<tr>
<td>S914do</td>
<td>Richard Strauss</td>
<td>Don Juan,</td>
<td>[title] symphonic poem</td>
</tr>
</tbody>
</table>

In addition to use of the Cutter number for composers' last names, Cutter numbers are also reserved for the following types or groupings of works:

- A673 Archives
- C551 Choral
- C555 Christmas
- E21 Education, Music
- F666 Folk music
- H673 History
- I59ba Band
- I59inOrg Organ
- I59or Orchestral
- J42 Jazz
- M918 Sound track
- M986 Musical comedy
- O61 Opera


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In order to subdivide these broad composer call numbers, periods, country or form and number designations are used, e.g., B415coP-5 represents Beethoven's *Concerto for Piano, Number 5*. Mozart's *Symphony No. 40* is represented by the number M939sy40. The music history section is subdivided into periods by abbreviations representing the baroque (ba), the renaissance (re), and the medieval (me) periods.

<table>
<thead>
<tr>
<th>Call Number</th>
<th>Composer/Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>H673re</td>
<td>History</td>
</tr>
<tr>
<td>H673re</td>
<td>renaissance</td>
</tr>
<tr>
<td></td>
<td>[period]</td>
</tr>
</tbody>
</table>

Folk music, as indicated above, is subdivided by the folksinger or country from which the music originates.

- F666se—Folk music sung by Pete Seeger
- F666b—Folk music sung by Joan Baez
- F666fr—Folk music from France

When additional copies of recordings are acquired, they are numbered in order of accession:

- B415sy7  Beethoven Symphony No. 7
- B415sy7  Beethoven Symphony No. 7
- 2        N. Y. Philharmonic
- B415sy7  Beethoven Symphony No. 7
- 3        London Symphony

If a second copy of the same recording by the same performer is added, c.2 is added to the call number.

- B415sy7  Beethoven Symphony No. 7
- 2        N. Y. Philharmonic
- c.2

When an additional title by a composer whose work is already on the shelf is added, in the case of sound tracks, the call number indicates the composer. Subsequent additions by the same composer but with different titles are indicated in the manner:

- M918Loe  Camelot
- M918Loe  Gigi
- 2

A second copy of *Camelot* by by different performers would be indicated as

- M918Loe
- 12

Library of Congress catalog cards are ordered or Polaroid copy from the music volumes of the *National Union Catalog* is used as often as

- 514

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possible. When these are unavailable, original cataloging is done. In each case tracings and analytics are made as completely as possible to direct the patron to the recording for which he is searching.

The first advantage of the system is that, for the most part, one composer's works are kept together, subdividing by form. When a patron becomes acquainted with the collection, he may bypass the catalog for any form of music by composer or any type of music.

A second advantage is found in that a large section of recordings do not develop under a "miscellaneous" heading because of the provision for areas such as choral, popular, band, and history which often have more than one composer represented on a disc.

This scheme provides for browsing, a composer's works are filed together, different forms under each composer are together, a large miscellaneous section does not develop, the card catalog may be bypassed in most cases, and reshelving is not difficult. The scheme may be expanded to include spoken, documentary, or explanatory recordings. It is felt that this scheme refutes some criticisms of record classification and will afford a system for those who are searching for a new or better one.
Networks, Automation and Technical Services: Experience and Experiments in New York State*

Peter J. Paulson
Principal Librarian for Technical Services
New York State Library
Albany, New York

Reviews recent developments in centralized processing and interlibrary cooperation in New York State, and summarizes present activities and plans of the New York State Library in the field of library automation. The importance of bibliographic access to the concept of network cooperation, and the need for a critical review of traditional library practices, are stressed.

At many recent meetings, the topics of library networks and interlibrary cooperation have been treated as startlingly new ideas, suddenly burst forth as glorious revelations to the library community. In fact, of course, we have had interlibrary cooperation and informal networks at least since the turn of the century—ever since the beginning of the LC card service in 1901 (the sharing of bibliographic data), the development of the ALA Catalog Rules in 1908 (the standardization of bibliographic description), and the publication of the ALA interlibrary loan code in 1917 (the voluntary sharing of library resources). What is new today is the attempt to extend and carry forward these early concepts by placing them upon a sounder and more equitable financial basis, by creating formal organizational and contractual relationships between libraries, and by utilizing the latest technological developments to carry them out.

In New York State, this development has been exemplified by the remarkable growth of the public library systems. Here we have moved from some 700 largely uncoordinated public libraries, each carrying on its own technical services activities, to the present twenty-two major acquisitions, cataloging, and processing centers. The success of the public library processing centers has undoubtedly inspired current activities in New York State directed towards the establishment of regional processing centers for other types of libraries, such as those proposed for school libraries and the State University. Today the public libraries are working towards further centralization and consolidation of technical

* Presented at the Fall meeting of the New York Technical Services Librarians, December 6, 1968; information revised for publication, June 1969.
services, and are even looking toward the creation of a single statewide catalog.

A major step toward further centralization in New York State was taken in 1966 with the publication of *Centralized Processing for the Public Libraries of New York State*, a study prepared by the Nelson Associates (as part of a larger evaluation of the public library systems) for the Library Development Division of the New York State Library.¹ This study recommended:

1. a single cataloging and acquisitions center for all public libraries;
2. three processing or book preparation centers;
3. a union catalog in book form, supplanting card catalogs in some libraries.

It was discovered in the Nelson study that public libraries in New York State spend some $5 million annually on technical services, and that of 2,400,000 items processed each year only 45,000 different titles are involved. Elimination of these highly duplicative efforts would result in an estimated annual saving of nearly $900,000. The Nelson Associates suggested that three to five years would be needed for implementing this plan, and that the following questions would need to be resolved:

1. organizational structure, 2. financing, 3. location, 4. cataloging practices, and 5. the extent to which old catalogs would be converted. The report also recommended that the cataloging and acquisitions center utilize data processing techniques.

The outcome of these recommendations has been the formation of the Association of New York Libraries for Technical Services, an organization whose membership consists of the twenty-two public library systems in New York State. This group has developed an organizational structure, elected a board of nine trustees, chosen a director and a temporary office site, achieved major agreement on standardized cataloging practices, and is proceeding with the implementation of a computer-assisted acquisitions system on a pilot or experimental basis.

Within the past few years, another type of system has come into being: the Reference and Research Library Resource systems. These 3R systems (as they are popularly called) have as their members public library systems, colleges, universities, and special libraries; and take as their objective providing serious library users with improved access to advanced research library materials. There are nine of these regions in the state, and their typical activities include delivery services, reciprocal use privileges, cooperative collection development, and newspaper microfilming projects. While none of these regions is at present contem- plating acquisition, cataloging, or processing services, several are concerned with the creation and maintenance of union catalogs. As examples, the Capitol District Council has already begun to create such a cat-

alog—and the Western New York region is presently microfilming library shelflists and studying the feasibility of converting this information to machine readable form. Here we have one of the major implications of network development for the technical services—the necessity of developing means of common bibliographic access as a precondition of effective common physical access.

One of the most ambitious programs within the 3R's framework has been the New York State Interlibrary Loan network (or NYSILL, as it has come to be called). The NYSILL network provides a referral system which is designed to give the serious library user access to resources far beyond those available in most public, college, and university libraries. This access is based upon a contractual relationship between the New York State Library and a number of resource libraries around the state, including such major research collections as the New York Public Library and Cornell University, and such highly specialized collections as those of the Engineering Societies Library and Union Theological Seminary. Participating resource libraries may supply photocopy or microfilm in lieu of lending the actual volume. Within this network, the collections of the New York State Library have continued in their historic role as a major resource in support of other libraries in the state, and the library has taken on a new role as a switching and referral center for eligible requests.

In order to provide bibliographic support for the NYSILL network, the state library has undertaken to sponsor the publication of a New York State Union List of Serials. The purpose of this project will be to produce a list of serials currently received by the major research and reference libraries of the state, with emphasis on those resource libraries in the NYSILL network. Building on an existing computerized serials data bank at the State University Upstate Medical Center, it is expected that the list will be published late in 1969. With a definition of scope which is broader than that of the third edition of the Union List of Serials, the New York State list will also more adequately reflect the tremendous expansion which has taken place in library collections in New York State since World War II (an expansion which is not represented in the third edition of the Union List of Serials, because of the editorial restrictions placed upon additional holdings statements in that list). A by-product of this project will be to make available to the participating libraries, and to the New York State Library, a machine-manipulable record of the serial holdings of those libraries in the NYSILL network.

Because of the key role which the New York State Library occupies in this network development, I should like to tell you something about our present and proposed automation activities. Recognizing that the control of bibliographic information is the key to all other library automation projects, the state library is proposing to begin next year to convert both its retrospective and current catalog information to machine readable format. Along with that conversion, it is proposed...
to develop a system which will provide on-line access to the state library catalog, from both remote and local terminals. At least ten types of indexes will be constructed (including title and subject keyword indexes), to allow extended and improved access to catalog information. Advantages of on-line, machine-stored catalog information include up-to-dateness, elimination of costly book and card catalogs, and the capability of using MARC data available from the Library of Congress. Project and system design for this proposal are in their early stages, and, in preparation for it, a computer simulation of technical services operations has already been constructed.

A comprehensive automated serials control system is presently operational at the state library. This system provides computer controls over posting, follow-up, binding, and billing functions for some 4,500 of the 10,000 currently received non-document serials at the library, and we are adding about 200 serials a week to the automated system. Another system, operational as of January 1969, provides monitoring and accounting reports for all interlibrary loan requests in the NYSILL network. Later phases will provide presearching of interlibrary loan requests against state library circulation and serials files, statistical reporting and analysis, and, for those system and referral libraries having telecommunications equipment, the capability of transmitting and receiving information directly to and from the computer.

In the next few years, technical services librarians will have an important role to play in the further development of interlibrary cooperation. That role will be even more critical and essential than it was in the early years of the public library systems, because so many of our large networks will require improved bibliographic access and the thoughtful use of computer technology. Further centralization of technical services activities, the development of common catalogs, and the full realization of the promise and the potential of the computer are tasks which are uniquely dependent for their success upon the support, concern, and involvement of technical services librarians.

In facing these tasks we will need to reexamine our thinking about filing rules, catalog codes, standards for bibliographic description, the need for local variation from national practices, the depth and effectiveness of subject analysis, and book versus card catalogs. These issues are not new, but they are sharpened, made more urgent, and are given new dimensions by the machine technologies now available to us. Today, when so many libraries are considering the creation of new catalogs and the utilization of new methods of storing and disseminating catalog information, we are offered an opportunity to reopen some of these basic issues in librarianship. The challenge to librarians to be imaginative innovators is no less now than it was some seventy years ago, when Dewey, Cutter, Hanson and others rose so admirably to that challenge. Let us hope that we can meet today's challenge with as much foresight, courage, and good sense as they did.
Automation in University Libraries—
the State of the Art

JAMES H. BYRN
Assistant Systems Analyst
Bizzell Memorial Library
University of Oklahoma
Norman, Oklahoma

A comprehensive survey of the actual state of automation in university libraries as reported by the individual library. Points out trends and problem areas. Deals only with operations now in being. While not attempting to itemize details, it brings the true picture of the art into bold relief. Results seem to indicate a definite dearth of meaningful, actually functioning programs. Much smoke has been generated, but actual accomplishments are minimal. Major reasons for lack of progress are critical shortage of skilled personnel, lack of funds, and a lack of dependable facilities.

Introduction

THE STUDY HEREIN DISCUSSED evolved with a dual objective in mind; as an attempt to decide what the next step in automation should be here at the University of Oklahoma Library and as a sorely needed compilation of the state of the art within the subject area confines of the study.

Specifically, it was decided that the Bizzell Memorial Library at the University of Oklahoma, having become extensively involved in the field of automation, was at that inevitable crossroad where one must proceed with the utmost caution into the next step lest one create complete chaos out of what has already been accomplished. In short, the systems staff found themselves between the proverbial “rock and a hard place.” For the purposes of this study automation shall be defined to include all phases of data processing and the more sophisticated “information retrieval.”

Of course, many things entered into the quandary: Having made tremendous strides with Unit Record Equipment under the direction of the Systems Analyst, Mrs. Kathleen Maher, should they continue as such or was this the time to plunge into computers? If so, did the by-products gained justify the tremendous increase in cost? Were the necessary skilled personnel available to oversee such a program? What influence would be exerted by the MARC project? Indeed, because of the
tremendous influence generated by MARC, did they even have freedom 
of choice in future actions?

The attitudes and facilities of other departments of the university 


had to be considered. Were there now adequate computer facilities 


“on-board” at the university to give the library the required support? Could they, or would they, be willing to give the library the necessary 


priority of usage time, if the “hardware” were available?

It can readily be seen that much agonizing soul-searching seemed to 

be the order of the day. As a direct result of all this, it occurred to the 

staff that, if they were experiencing such “growing pains,” surely other, 
similar libraries were either in the same boat, or had, perhaps, already 
come up with a workable solution.

With this idea in mind, the systems staff enthusiastically sallied forth 
to the “stacks” and journal bins prepared immediately to discover many 
and varied ready-made solutions or at least guide-posts in their quest. Many 
hours later they staggered back quite chagrined to discover that 


they had been somewhat in error in their original rosy expectations. Despite the flood of publications on the subject of automation, most 


were in the theoretical realm or else had to do with planning conferences, etc. Few, with the notable exception of the ALA Journal of Library 

Automation, really delved into the specific day-to-day problems of de-

signing, building, and actually operating such a facility, at least in the 

academic environment. Both INTRIX and MARC were examined, 


but are considered more of a library-world-wide experiment for the 

purposes of this study.

Survey Scope and Results

As mentioned initially, this pointed out an apparent dearth of in-

formation which would seem to be sorely needed throughout the world 
of university libraries. How to obtain this information became the next 
problem. Fortunately, they were able to fall back on that tried and true 
tool of librarians throughout the ages, “the questionnaire.” Actually, 

this seemed the only true source of information and compilation soon 
followed.

Of course, before one can mail out a questionnaire, one must select 
suitable “victims” (i.e., those persons or institutions most likely to be in 
possession of the desired facts). This problem was solved in handy 


fashion by use of the ninth edition of Carter’s American Universities 

and Colleges. Using the generally accepted definition of a university 
as being an institution of higher learning with the authority to grant a 
doctoral degree, the search was limited to those thus designated in 

Appendix VI of Carter’s work. Separate libraries, such as medical 

libraries, were not included. The final outcome was a list of 194 uni-


versities (including five separate branches of the University of California). The University of Oklahoma’s own contribution made 195. Colleges 
as opposed to universities) were specifically excluded because of a desire 
to limit the study to institutions most similar to the University of 

Oklahoma.

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As in any study of this nature, it had to begin with a few basic assumptions. Since this is a survey requiring an exchange of information, and since it is entirely dependent upon the answers received for the data, the following assumptions were made:

1. That the individual answering the questionnaire was knowledgeable on the subject.
2. That he was completely open and candid about his situation.
3. That terminology employed had the same meaning for all concerned.

Without going into great detail, the information sought through the questionnaire can be summarized as follows. Each addressee was questioned as to what extent and in what areas he was presently automated (e.g., circulation control, catalog production, serials control, information retrieval, etc.). If he was automated, on what type of equipment did he base his system (e.g., computer, unit record equipment) and in what configuration? Also, if computer based, was his work handled on-line, shared time, or how? He was queried as to what major problems he had encountered, the general attitude of his professional staff towards automation, and whether it had released them from clerical work in order that they could devote more time to "professional" aspects? To provide us with additional background material, they were also asked what their future plans were in this area (e.g., use of MARC, etc.), whether their system provided direct support to any other organization and when (and with what?) they implemented their initial project?

At this point it would probably be appropriate to mention that 59 per cent of those libraries queried returned the completed questionnaire, certainly well within the limits required for a valid survey.

In order to be as fair as possible and also to allow for possible misinterpretation of the questions, every attempt was made to credit all possible offerings as examples of automation. It would be well to mention here, however, that only those projects which were stated as actually being in operation were accepted. Not accepted were projected programs or those expressly termed experimental. Also, it was difficult in many cases to differentiate between serials control and a union list of serials or whether acquisitions included both purchasing procedures (e.g., printing of order form, card order, etc.) and accounting. Another difficult term to interpret was that of information retrieval. Obviously it was necessary to exercise a degree of judgment here; however, such instances were not numerous enough to affect the survey outcome to any great extent.

Types of projects were broken down into eight categories as follows: circulation, acquisitions, accounting, serials control, lists, catalog production, interlibrary loan, and information retrieval.

Keeping the above in mind, of the 116 libraries replying, including the University of Oklahoma, 59 (or 51 per cent, stated that they were automated to some extent. Of these 59, 30 had only one project that
could be considered as automated and in many cases this consisted of some kind of minor listing of some portion of the collection. While there is certainly no intention of belittling these projects, they can hardly be termed major and this is a significant point for the study. (Union lists of serials are not included in this comment.) Of the remaining 29 libraries, only 12 had more than 2 ongoing projects. These are shown in Table 1, with the types of projects, as stated on their returned questionnaire. In several cases, acquisitions was assumed to include accounting.

Table 2 gives a synopsis of automation reported by project type percentage. This includes only those 59 reporting they were automated. The 59 are represented by 100 per cent in the Table.

Insofar as equipment is concerned, only 7 of those libraries reported as being automated indicated that they were completely dependent on unit record equipment. The rest indicated that they were computer supported. While difficult to be absolutely certain in all cases, the great majority (over 90 per cent) apparently did not have the computers under library control but were dependent upon outside assistance. This did cause problems in some cases. Probably no surprise to anyone, IBM is by far the largest supporter of computer operations for these libraries. Of the 52 using computers, 37 (71 per cent) were using IBM equipment and 22 (43 per cent) of these were using an IBM 360 system. Approximately 50 per cent reported personnel as their major problem area. This included matters such as little or no training, rapid turnover, inexperience, and just plain inability to communicate with business and scientifically oriented programmers who were completely competent in all other ways. The second major problem area was that old nemesis of all libraries, a lack of adequate funds. This was to be expected. One other significant point was the tendency of campus computer centers to slip the library to the end of the line in priority when things became tight.

Possibly of some surprise, only 3 reported their professional librarians as antagonistic to automation, while of the 64 answering the question, well over 60 per cent of these reported their professionals as downright enthusiastic.

Little time seems to be saved, but the by-products and efficiency produced seem to be enormous in those areas which have been automated. Of those already automated, only one seemed to be disenchanted, and most were prepared to forge ahead as soon as funds and personnel allowed.

Recognizing the enormous cost and planning involved, many libraries were aligning themselves with regional setups for increased efficiency, etc. Some of those mentioned were the Colorado Academic Libraries Book Processing Center, Pacific Southwest Regional Plan for Medical Library Cooperation, Consortium of Universities of the Metropolitan Washington Area, Nevada Center for Cooperative Library Services, New England Library Information Network (NELINET),
<table>
<thead>
<tr>
<th>Location</th>
<th>Circulation</th>
<th>Acquisitions</th>
<th>Accounting</th>
<th>Serials Control</th>
<th>Lists</th>
<th>Catalog</th>
<th>ILL*</th>
<th>Information Retrieval</th>
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<tr>
<td>Univ. of Hawaii</td>
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*INTERLIBRARY LOAN
The final area for consideration is that of future planning. Of the 57 libraries reported as not presently automated, 38 (67 per cent) indicated an interest in becoming so. The rest were noncommittal. Most of those interested seemed to be waiting for funds. Also mentioned was their inability to acquire the people with the necessary skill, either through direct employment or on a loan basis, and their failure to obtain a guarantee of the required computer time from the supporting computer center involved. This also is not surprising considering the often considerable amounts of expensive computer time involved in library operations.

Southwest Academic Library Consortium, and the Ohio College Library Center.
Conclusions and Implications

Based upon the initial search of the literature and the results shown by the survey, it is felt that the following major conclusions can be drawn concerning automation in university libraries: (1) major progress is sadly lacking, with a very few notable exceptions; (2) such progress as has been made is confined almost exclusively to technical processing or circulation (again, with a few notable exceptions); (3) outside of the original group that experimented with the project, the prevailing attitude concerning MARC is one of either watchful waiting or wishful wishing; (4) information retrieval, particularly if we disregard MARC and INTREX, is little advanced outside of the science fiction stage; and finally, (5) the three most prevailing reasons given for this relative lack of progress appear to be (in that order) (a) a critical lack of properly skilled personnel, (b) a shortage of funds available, and (c) a lack of the facilities to properly carry out a meaningful automation program. (Included in this point are the problems involved in dealing with outside support.)

Some implications to be drawn from the above conclusions are fairly obvious and a little painful. First, a terrific amount of smoke-screen has been generated over the past decade but actual accomplishments are minimal, at least in the university environment. Secondly, automation, while certainly capable of providing tremendous assistance, has not proved to be the panacea that many of its theoretical advocates had promised. This is not to say that a large part of its promise will not be fulfilled in future years. In line with the first two implications, the final thought is that much more emphasis must be given to the training of the personnel who are to accomplish the desired breakthrough. We speak primarily of your library automation specialists; however, let us not forget the plain old everyday garden variety librarian who will have to deal with a much more complex library world than would have been thought possible a few years ago. Library schools, particularly, must update their curricula to provide this additional training. There is no great need to become overly involved in theoretical mathematics courses. Let the industrial engineers, etc., handle this. What is needed, as a minimum, is exposure of these neophytes to the existence, and some of the uses, of automation in the hope that they will at least be able to equate it with their future work. This is the crux of the matter and probably the major reason why university libraries are lagging the automation race.

List of Institutions Queried

* answered questionnaire
** answered questionnaire, automated to some extent

**Auburn Univ.
Auburn, Alabama

*Univ. of Alabama
University, Alabama

Univ. of Alaska

**Arizona State Univ.
Tempe, Arizona

The Univ. of Arizona
Tucson, Arizona

College, Alaska

Library Resources & Technical Services
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<td>Orono, Maine</td>
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<td>**Princeton Univ.</td>
<td>Princeton, N. J.</td>
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<td>*Rutgers—The State Univ.</td>
<td>New Brunswick, N. J.</td>
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<td>**Stevens Inst. of Tech.</td>
<td>Hoboken, N. J.</td>
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<tr>
<td>New Mexico Highlands Univ.</td>
<td>Las Vegas, N. M.</td>
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<tr>
<td>New Mexico Inst. of Mining &amp; Tech.</td>
<td>Socorro, N. M.</td>
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*Library Resources & Technical Services*
*New Mexico State Univ.  
Las Cruces, N. M.

*The Univ. of New Mexico  
Albuquerque, N. M.

*Adelphi Univ.  
Long Island, New York

Alfred Univ.  
Alfred, N. Y.

The City Univ. of N. Y.  
New York, N. Y.

*Clarkson College of Tech.  
Potsdam, N. Y.

Columbia Univ.  
New York, N. Y.

**Cornell Univ.  
Ithaca, N. Y.

*Fordham Univ.  
New York, N. Y.

Jewish Theological Sem. of Amer.  
New York, N. Y.

**New School for Social Research  
New York, N. Y.

New York Univ.  
New York, New York

Polytechnic Inst. of Brooklyn  
Brooklyn, N. Y.

Rensselaer Polytechnic Inst.  
Troy, N. Y.

*St. Bonaventure Univ.  
St. Bonaventure, N. Y.

St. Johns Univ.  
Jamaica, N. Y.

State Univ. of N. Y.  
Albany, N. Y.

State Univ. of N. Y.  
Buffalo, N. Y.

State Univ. of N. Y.  
Stony Brook, Long Island

Syracuse Univ.  
Syracuse, N. Y.

*Teachers College, Columbia Univ.  
New York, N. Y.

Union College & Univ.  
Albany, N. Y.

**Univ. of Rochester  
Rochester, N. Y.

*Yeshiva Univ.  
New York, N. Y.

*Duke Univ.  
Durham, N. C.

North Carolina College  
Durham, N. C.

**N. C. State Univ.  
Raleigh, N. C.

Univ. of N. C.  
Chapel Hill, N. C.

Univ. of N. C.  
Greensboro, N. C.

Fargo, N. D.

*Univ. of North Dakota  
Grand Forks, North Dakota

Case Inst. of Tech.  
Cleveland, Ohio

*Hebrew Union College  
Cincinnati, Ohio

Kent State Univ.  
Kent, Ohio

*The Ohio State Univ.  
Columbus, Ohio

*Ohio Univ.  
Athens, Ohio

*The Univ. of Akron  
Akron, Ohio

*Univ. of Cincinnati  
Cincinnati, Ohio

**Univ. of Toledo  
Toledo, Ohio

Western Reserve Univ.  
Cleveland, Ohio

Stillwater, Okla.

*Univ. of Tulsa  
Tulsa, Okla.

*Oregon State Univ.  
Corvallis, Oregon

**Univ. of Oregon  
Eugene, Oregon

*Univ. of Portland  
Portland, Oregon

Bryn Mawr College  
Bryn Mawr, Penn.

**Carnegie Mellon Univ.  
Pittsburgh, Penn.

Dropsie College for Hebrew & Cognate Learning  
Philadelphia, Penn.

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529
Duquesne Univ.
Pittsburgh, Penn.

**Lehigh Univ.
Bethlehem, Penn.

**The Penn. State Univ.
Univ. Park, Penn.

*Philadelphia Col. of Pharm. & Sci.
Philadelphia, Penn.

*Temple Univ.
Philadelphia, Penn.

Univ. of Penn.
Philadelphia, Penn.

**Univ. of Pittsburgh
Pittsburgh, Penn.

Westminster Theological Sem.
Philadelphia, Penn.

**Brown Univ.
Providence, Rhode Island

Univ. of Rhode Island
Kingston, Rhode Island

*Clemson Univ.
Clemson, S. C.

Univ. of South Carolina
Columbia, S. C.

*South Dakota State Col. of Ag. &
Mechanic Arts
Brookings, S. D.

**Univ. of South Dakota
Vermillion, S. D.

*George Peabody Col. for Teachers
Nashville, Tenn.

*Univ. of Tennessee
Knoxville, Tennessee

**Vanderbilt Univ.
Nashville, Tennessee

Baylor Univ.
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East Texas State Univ.
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*North Texas State Univ.
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Rice Univ.
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Southern Methodist Univ.
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Texas Womans Univ.
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Univ. of Wyoming
Laramie, Wyoming

* 530 *

Library Resources & Technical Services
The Computer-Controlled Periodicals System at the San Francisco Public Library

DAVID E. BELCH
Public Information Officer
San Francisco Public Library
San Francisco, California

THE SAN FRANCISCO PUBLIC LIBRARY believes itself to be the first public library in the country to develop a completely computer-controlled periodicals system. Computer planners have long predicted that libraries, with their masses of repetitive clerical transactions, would be natural candidates for the application of electronic data processing. Although general progress has been slow, staff-short San Francisco Public Library found it necessary to speed application of the available technology.

The computer-controlled periodicals system was developed by Mrs. Linda Crismond of the Library's Technical Services Department, in cooperation with the City of San Francisco Electronic Data Processing Center. Starting two years ago with $30,000 of state funds, the project is now being carried out under the library's normal operating budget.

The most important result of the project is the recent publication of a three-volume book catalog of 6,630 magazines, newspapers, selected government documents, and serials held by the library. Complete information about these periodicals was previously available only in the Periodicals Department card catalog. The new book catalog is now available in every department of the Main Library, in all neighborhood branches, and on the bookmobile.

Extra copies of the book catalog were printed and are now being distributed to public, academic, school, and special libraries throughout northern California. This distribution has been underwritten by the Bay Area Reference Center, a federally-funded demonstration reference project sponsored by the library.

The catalog itself is entirely computer produced. Complete information on the library's periodicals is stored on magnetic tape in the City EDP Center. From this information the computer "composed" the catalog on another tape. This tape was then transformed into microfilm through another automated process and the microfilm used in turn to produce offset plates from which the catalog was printed.

The first volume of the book catalog lists the library's periodicals by title. For each, the call number, explanatory notes, a description of...
holdings, and the location is listed. The second volume arranges the periodicals under 1,430 cross-referenced subject headings from "Abstracts" (77 titles) to "Zoology" (15 titles). The place of publication, call number, holdings, and location are given for each title. Volume three indicates those magazines, newspapers, or serials that are printed wholly, or in part, in a foreign language. The library receives 815 such publications: 323 in French, 263 in German, 86 in Spanish, 75 in Italian, 37 in Japanese, 7 in Chinese, and 24 in other languages. The foreign language catalog is considered a major development in itself. The library does provide a number of periodicals in languages other than English and now has an easy way to locate materials received.
This study appears to indicate that screening services provide citations in about one-half the time required by secondary publications. There is an average of five months for the screening services and nine months for the secondary publications. Modes are lowest and means highest for both. Thus, the great number of articles are reported reasonably early after publication, but there are enough with long lag times to notably raise the mean lag time. Screening services tend to over-select articles for clients by about 20-25 percent. Alternatives to screening services and/or secondary publications are tables of contents services, or individual contact with researchers known to be working in the field of interest.

Background

SCREENING SERVICE current awareness lag times are of interest to certain librarians and others, where timeliness of bibliographic control has become more important. They have felt the need for less delay in learning of, and perhaps acquiring, articles from the serial literature, rather than waiting for the appearance of citations in secondary publications, as indexes and abstracts.

In those cases where the libraries cannot screen the serial literature themselves or do not choose to, one answer has been the services offered through formation of collective serial literature screening centers. These screening centers provide not only bibliographic citations, but often supply copies of the individual serial articles in various formats, as tear sheets, offprints, or photocopies, as well. Thus, the client library can collect individual articles, rather than whole issues of entire volumes of serial titles. The screening services use selection statements by the clients, screening for many clients simultaneously with one perusal of the incoming literature. How do such services compare with indexes and abstracts for timeliness?

Study design

The selection statement for a mission-oriented scientific area of knowledge was used by three different screening services in an un-
announced study. One is operated by a major nonprofit institution on the east coast, one is housed in the campus of a midwest academic institution, and the third belongs to an east coast society. They actively screened and selected serial articles for six months. Their average lag times were compared with each other, and the citations they found were then searched in two major secondary publication sources important in that area of scientific knowledge. One and one-half years of these secondary publications were checked to allow ample time for citations to appear. The lag time for those found in the indexes and abstracts was also recorded, so that a comparison could be made of the screening services lag. In all cases, lag time was defined as the difference between the date printed on the item, or best date ascertainable of the publication appearance when none was printed, versus the date the client first was informed of the existence of the item, rounded to the nearest whole month.

In using the indexes and abstracts, citations were searched promptly upon receipt of the new issues of each. Earlier and later issues were rechecked to increase the chances of finding the citations as new ones were furnished by the three services. The purpose was to learn if the screening services actually provided more rapid current awareness than did the secondary publications, or if internal processing within the screening services and other delays nullified any theoretical advantage they might provide. A secondary purpose was to compare the efficiency of the three screening services.

Lag Times Compared

Table 1 shows the mean, median, and mode (average) lag times in months between the three screening services and the secondary publications. In general, the screening services do provide citations more quickly by an average of about four months (5 vs. 9 months), that is, in about one-half of the time that secondary publications do in this area of science. This is reasonable, because it is the purpose of the screening service to be more rapid. Also, the screening services are not indexing, abstracting, or publishing on a set schedule as are the secondary publications, and the latter have current awareness as only one of their many objectives. Among the three services, the lag time of numbers two and three are comparable and much less than that of number one.

Perhaps all screening services do not operate comparably, or have equivalent lag times, and a number of variables may suggest the reasons why—for example: number, capability and training of staff, internal routing and processing of serials, actual number of serial issues and titles screened, languages encountered, domestic and foreign publication, amount of backlog, time of the year, number of clients serviced, whether automated equipment and/or photocopy machines are used, means of delivery to the client, etc. No matter the variables, only the result, minimum lag, counts. For lag time, the modes are always lowest and the means highest. This indicates that most frequently there are a
great number of articles appearing in a group on the lists early after publication, but that there are sufficient numbers with long lag times to notably raise the mean. Considering variables listed above that can influence the lag, this is understandable.

Additional Findings

Table 1 shows more. In general, the screening services select more items than are accepted by the client. This is not surprising, and also there is the possibility that they are not selecting some items that would have been selected by the client; however, this possibility was not investigated. Examination of Table 1 shows that only 148 items were found in indexes and abstracts within the one and one-half year period that was checked in the secondary publication. This indicates that, compared with the number of items identified by the screening services (176-772), strict reliance on the secondary sources would leave many items unidentified, or not identified until possibly later, depending upon the backlog at the headquarters of the secondary publications. This is reasonable, for not all serial titles are indexed, and there are backlogs. Also, in following a particular area of interest, its literature may not fall neatly into the coverage of the secondary publications.

No evaluation was made of the worth of the serial titles or the articles, for this would have been too subjective. Even when the 176-772 items are reduced to the 138-578 ultimately accepted by the client (78.4-78.8 percent of the items originally selected), the screening services efforts seem worthwhile. This is true if more articles are felt to be needed by the client than would be available from the secondary sources. All three screening services ended with approximately the same percentage of items ultimately accepted from those offered. Apparently, while the volume may differ, they over-select initially in the same range of about 20-25 percent.

Alternatives

What alternative does the client have to using a secondary publication or a screening service? One possibility is the use of a table of contents service, where in advance of regular publication of serials, their tables of contents are collected and published together in a distinctive issue. An example of this in science is Current Contents published by the Institute for Scientific Information in Philadelphia. A subscriber can screen the published tables of contents but cannot screen the articles without going elsewhere. Another, and much more expensive possibility, is for the client to create a file of names and addresses of researchers known to have worked or be working in the area of interest. In turn, the client contacts them individually and learns what they are working on, what they will publish, where, when, and even perhaps arranges for advance copies. Further study is indicated in comparing the costs of screening services with the other methods, so that an overall judgment can be made as to cost of effectiveness.

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### TABLE 1

Current awareness lag time in months of serial article citations provided by selected scientific screening services and secondary publications (with numbers of articles selected and accepted by client)

<table>
<thead>
<tr>
<th>Lag time (Months)</th>
<th>Screen Service No. 1</th>
<th>Screen Service No. 2</th>
<th>Screen Service No. 3</th>
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<tr>
<td>Mean</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Mode</td>
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<td>2</td>
<td>2</td>
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<table>
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<tr>
<th>No. items selected by screening service</th>
<th>176</th>
<th>494</th>
<th>772</th>
<th>148</th>
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<tr>
<td>No. items accepted by client</td>
<td>138</td>
<td>354</td>
<td>578</td>
<td>148</td>
</tr>
<tr>
<td>Percent accepted of items selected</td>
<td>78.4%</td>
<td>76.6%</td>
<td>74.8%</td>
<td>-</td>
</tr>
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</table>

1/ Lag time is defined as the difference between the date printed on the item or best date ascertainable of the publication appearance when none was printed, versus the date the client first was informed of the existence of the item, rounded to the nearest whole month. Test conducted for six months.

2/ Numbers of articles included an undetermined amount of overlap in which the same article was reported by more than one source.

3/ A major nonprofit institution on the east coast.

4/ An institution housed on a midwest academic campus.

5/ An east coast society.

6/ Two major science secondary publications in which the citations furnished by the screening services were searched for a period of 1-1/2 years from the beginning of the test.
Optimum Distribution of Centrally Processed Material: Multiple Routing Solutions Utilizing the Lockset Method of Sequential Programming

James C. Hsiao
Assistant Professor of Economics

and

Fred J. Heinritz
Professor of Library Science
Southern Connecticut State College
New Haven, Connecticut

The lockset method of sequential programming, a simple procedure recently developed by Schruben and Clifton, is shown to be applicable to library distribution problems involving multiple routing. The method is explained in detail and illustrated by applying it to a given library problem involving optimum distribution of centrally processed material.

Introduction

In a previous article Heinritz and Hsiao have described a procedure giving a near-optimum solution to the problem of routing a vehicle through a number of service points so as to allow distribution of centrally processed books at minimal cost. This procedure was limited to the case where only a single vehicle was required, and where its capacity was not exceeded at any point on the route, so that it was able to complete the distribution in a single round trip, without returning to the starting point (except at the end) a second time.

Routing problems also arise where more than one vehicle is required to complete the distribution within an acceptable period of time. In these problems the quantity to be delivered from the distribution center to each service point (or from the service points to the center), the number of vehicles available, the capacity of each, and the maximum distance each can be driven at one time must be considered. (This last restriction is usually due to limitations on driver work hours and the like rather than mechanical limitations of the truck.) A simple procedure for determining near-optimum solutions for these more complex problems has been developed by Schruben and Clifton. This procedure, known as the lockset method of sequential programming, may also be applied to problems of the Heinritz-Hsiao type, and it is always possible that for a given particular set of data.

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it may give a nearer-optimum solution than the Heinritz-Hsiao procedure. However, for such problems the Heinritz-Hsiao method is less tedious and time-consuming than lockset (at least without a computer), so that the principal interest in the latter, so far as librarians are concerned, will probably be its application to the multiple routing problem described above.

A Library Multiple Routing Problem

Suppose that, as in the previous article, we are studying a library system using centralized processing done at the main library (A), and that these materials must then be distributed among eight branches (B . . . I), each in a different location. The cost of transport between each of these nine locations (essentially the same as those used in the previous article) is given in Table 1.

Table 1  Cost of Transport Between All Pairs of Libraries to be Visited

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Inf.</td>
<td>4.8</td>
<td>2.0</td>
<td>1.6</td>
<td>2.8</td>
<td>3.3</td>
<td>4.9</td>
<td>2.3</td>
<td>0.8</td>
</tr>
<tr>
<td>B</td>
<td>4.8</td>
<td>Inf.</td>
<td>3.6</td>
<td>5.6</td>
<td>6.8</td>
<td>1.9</td>
<td>9.6</td>
<td>2.8</td>
<td>5.6</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>3.6</td>
<td>Inf.</td>
<td>2.1</td>
<td>4.3</td>
<td>2.0</td>
<td>6.3</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>D</td>
<td>1.6</td>
<td>5.6</td>
<td>2.1</td>
<td>Inf.</td>
<td>4.0</td>
<td>4.1</td>
<td>4.3</td>
<td>3.5</td>
<td>1.9</td>
</tr>
<tr>
<td>E</td>
<td>2.8</td>
<td>6.8</td>
<td>4.3</td>
<td>4.0</td>
<td>Inf.</td>
<td>5.9</td>
<td>4.3</td>
<td>4.1</td>
<td>2.2</td>
</tr>
<tr>
<td>F</td>
<td>3.3</td>
<td>1.9</td>
<td>2.0</td>
<td>4.1</td>
<td>5.9</td>
<td>Inf.</td>
<td>8.0</td>
<td>2.3</td>
<td>4.0</td>
</tr>
<tr>
<td>G</td>
<td>4.9</td>
<td>9.6</td>
<td>6.3</td>
<td>4.3</td>
<td>4.3</td>
<td>8.0</td>
<td>Inf.</td>
<td>7.1</td>
<td>4.2</td>
</tr>
<tr>
<td>H</td>
<td>2.3</td>
<td>2.8</td>
<td>2.1</td>
<td>3.5</td>
<td>4.1</td>
<td>2.3</td>
<td>7.1</td>
<td>Inf.</td>
<td>2.9</td>
</tr>
<tr>
<td>I</td>
<td>0.8</td>
<td>5.6</td>
<td>2.8</td>
<td>1.9</td>
<td>2.2</td>
<td>4.0</td>
<td>4.2</td>
<td>2.9</td>
<td>Inf.</td>
</tr>
</tbody>
</table>

In addition, the situation is further complicated by the following restrictions:

(1) The number of units of processed material to be delivered to each service point is as shown in Table 2.

Table 2

<table>
<thead>
<tr>
<th>Service Point</th>
<th>Units to be Delivered</th>
<th>Service Point</th>
<th>Units to be Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>5</td>
<td>F</td>
<td>6</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>G</td>
<td>5</td>
</tr>
<tr>
<td>D</td>
<td>7</td>
<td>H</td>
<td>2</td>
</tr>
<tr>
<td>E</td>
<td>15</td>
<td>I</td>
<td>14</td>
</tr>
</tbody>
</table>
(2) There are three vehicles available for distribution from the central library. The capacity of each, and the maximum distance each can be driven at one time are given in Table 3. Since the distance restriction must be expressed in the same units as are used in Table 1, it is expressed here in terms of cost.

<table>
<thead>
<tr>
<th>Delivery Vehicle</th>
<th>Capacity in tons</th>
<th>Maximum cost (distance) at one time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>II.</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>III.</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

These processed materials are to be delivered within some designated period of time. The given data does not allow all deliveries to be combined into a single trip. Therefore the Heinritz-Hsiao procedure is not applicable, and we shall solve the problem with the lockset procedure.

The Lockset Method Applied to the Solution of Multiple Routing Problems

In this section the Schruben-Clifton method, which is employed in this study, is described. The only modification made in this article is that, as in the previous Heinritz-Hsiao article, and for the same reason, we are concerned with cost rather than distance:

1. Examine the delivery list. If any delivery points are to receive an amount equal to or greater than the capacity of the largest delivery vehicle, assign it to deliver a capacity load to these stops. On the delivery list indicate the balance to be delivered as a partial load on another route.

2. Compile a list of all possible pairs of points to be visited not involving the starting-ending point.

3. Compute the CSC (cost-saved-coefficient) for each such pair. The cost-saved-coefficient is the cost to be saved by servicing each point in a given pair of points on the same route compared with the cost required to service each on a separate route. In Figure 1, X is the

![Figure 1](image-url)

Figure 1. Cost Saved by Including Points Y and Z on the Same Route.
starting-ending point, and Y and Z are two points to which material at X is to be distributed. The left-hand figure shows Y and Z each being serviced on a separate route at a cost of 20. The right-hand figure shows that, since the distance from Y to Z happens to be 5, combining Y and Z on the same route allows us to complete distribution at a cost of only 15. The CSC is thus 20 minus 15, or 5.

4) Consider joining the pair with the largest CSC on the same route.

5) Test the revised route for feasibility. The tentative pairing must meet four tests:

(A) Each stop must have at least one leg connected with the starting-ending point.
(B) Each stop must previously have been on a different route.
(C) A vehicle of sufficient size must be available to carry the combined load.
(D) A vehicle capable of traveling the required distance must be available.

6) Consider joining on a revised route the unused pair having the next largest CSC. Test the revised route for feasibility.

7) When there are no longer pairs to be tested, the optimum (or near-optimum) route has been identified.

Solution of the Given Problem by the Lockset Method

The given multiple routing library problem will now be solved by means of the lockset procedure described in the preceding section.

Given the above data, no delivery point is to receive an amount equal to or greater than the capacity of the largest delivery vehicle. (The largest number of units required is 15 at E, and vehicle I’s capacity of 20 exceeds this.)

In Table 4 all possible pairs of points to be visited (excluding the starting-ending point A) are listed, and their cost-saved-coefficients are computed. All necessary data are obtained from Table 1. The cost-saved coefficient is found as follows: (cost from Main Library to Column One Point) plus (cost from Main Library to Column Two Point) minus (cost from Column One Point to Column Two Point). Thus the CSC for the pair BC in the first row is (4.8 plus 2.0 minus 3.6) or 3.2.

The next step is to consider joining on the same route the pair with the largest CSC. From Table 4 it can be seen that this pair is BF, with a CSC of 6.2. Thus the first points to consider joining on the same route are B and F, and the first tentative revision from servicing each branch on a separate route direct from A (as A → B → A, A → C → A, etc.) would be to combine B and F into the single route A → B → F → A (or the reverse).

This revised routing must now be tested for feasibility by checking it against (A), (B), (C), and (D), the four feasibility criteria previously described:

Library Resources & Technical Services
Table 4 List of All Possible Pairs of Points to be Visited (Excluding A), and Their Cost-Saved-Coefficients

<table>
<thead>
<tr>
<th>All possible pairs of points (Excluding A)</th>
<th>Cost-Saved-Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column One</td>
<td>Column Two</td>
</tr>
<tr>
<td>Point</td>
<td>Point</td>
</tr>
<tr>
<td>B with C</td>
<td>4.8</td>
</tr>
<tr>
<td>B with D</td>
<td>4.8</td>
</tr>
<tr>
<td>B with F</td>
<td>4.8</td>
</tr>
<tr>
<td>B with G</td>
<td>4.8</td>
</tr>
<tr>
<td>B with H</td>
<td>4.8</td>
</tr>
<tr>
<td>B with I</td>
<td>4.8</td>
</tr>
<tr>
<td>C with D</td>
<td>1.8</td>
</tr>
<tr>
<td>C with E</td>
<td>2.9</td>
</tr>
<tr>
<td>C with F</td>
<td>2.0</td>
</tr>
<tr>
<td>C with G</td>
<td>2.9</td>
</tr>
<tr>
<td>C with H</td>
<td>2.0</td>
</tr>
<tr>
<td>C with I</td>
<td>2.0</td>
</tr>
<tr>
<td>D with E</td>
<td>1.6</td>
</tr>
<tr>
<td>D with F</td>
<td>1.6</td>
</tr>
<tr>
<td>D with G</td>
<td>1.6</td>
</tr>
<tr>
<td>D with H</td>
<td>1.6</td>
</tr>
<tr>
<td>D with I</td>
<td>1.8</td>
</tr>
<tr>
<td>E with F</td>
<td>2.8</td>
</tr>
<tr>
<td>E with G</td>
<td>2.8</td>
</tr>
<tr>
<td>E with H</td>
<td>2.8</td>
</tr>
<tr>
<td>E with I</td>
<td>2.8</td>
</tr>
<tr>
<td>E with J</td>
<td>3.3</td>
</tr>
<tr>
<td>E with K</td>
<td>3.3</td>
</tr>
<tr>
<td>E with L</td>
<td>3.3</td>
</tr>
<tr>
<td>E with M</td>
<td>4.9</td>
</tr>
<tr>
<td>F with J</td>
<td>4.9</td>
</tr>
<tr>
<td>G with J</td>
<td>4.9</td>
</tr>
</tbody>
</table>

(A) B and F are still each connected to the starting-ending point A.
(B) B was previously on the route A → B → A and F was on the separate route A → F → A.
(C) The required vehicle capacity is 5 units at point B plus 6 units at point F, or 11 units, and carriers I and II each have capacities in excess of this.
(D) The required cost to cover the route is (see Table 1) 4.8 (the cost from A to B) plus 1.9 (the cost from B to F) plus 3.3 (the cost from F to A) or 10.0 units, which does not exceed the maximum even for Carrier III.

Thus the tentative route A → B → F → A satisfies all four tests, and can be adopted. Vehicle II, which is the smallest available carrier capable of carrying the required 11 units, is assigned to this route, which we shall for convenience call Route 1.

The next largest CSC not yet used (4.8) is for pair BH. This pair satisfies all four feasibility tests. Vehicle II has sufficient capacity to carry the additional two units required at H. Therefore H is in
corPorated into Route 1, which now becomes A → H → B → F → A. The new distance (2.3 plus 2.8 plus 1.9 plus 3.3 = 10.3) gives a distance sum well below its maximum of 20 cost units. Note that B is no longer linked by a leg to the origin, but is instead “locked” between F and H.

The next largest CSC (3.4) is for pair EG. The quantity required to be delivered to these two points is 15 plus 5, or 20, which is far beyond the remaining capacity of vehicle II. Therefore we reject consideration of this pair for Route 1, and consider the next highest CSC. It happens that CF and FH both have an identical CSC of 3.3. However, F and H are already on the same route, and only CF meets all four tests. Vehicle II is capable of hauling the additional one unit required at C and is still below its maximum distance. C is therefore added to Route 1, which now becomes A → H → B → F → C → A. Since including any other point would exceed the capacity of vehicle II, Route 1 is now complete.

The above procedures are repeated until all pairs have been examined. It happens that with the given data, three additional routes are required for a near-optimal solution. All four routes are shown in Table 5. Note that the near-optimum distance, in cost units, is 28.9. A map of the near-optimum routing is shown in Figure 2.

Table 5 Near-Optimum Routing for the Given Library Problem

<table>
<thead>
<tr>
<th>Route Number</th>
<th>Delivery Points Included in Route</th>
<th>Vehicle Assigned</th>
<th>Vehicle Capacity</th>
<th>Combined Load</th>
<th>Distance (in Cost Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A→E→B→F→C→A</td>
<td>II</td>
<td>15</td>
<td>14</td>
<td>11.0</td>
</tr>
<tr>
<td>2</td>
<td>A→E→G→A</td>
<td>I</td>
<td>20</td>
<td>20</td>
<td>12.0</td>
</tr>
<tr>
<td>3</td>
<td>A→I→A</td>
<td>III</td>
<td>10</td>
<td>10</td>
<td>1.6</td>
</tr>
<tr>
<td>4</td>
<td>A→I→D→A</td>
<td>II</td>
<td>15</td>
<td>11</td>
<td>4.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>60</td>
<td>55</td>
<td>28.9</td>
</tr>
</tbody>
</table>

Conclusion

The lockset method will be of value to any librarian involved in a multiple routing situation. It is always helpful to begin with a suggested ideal solution. The librarian should, however, make appropriate adjustments from the near-optimum case to fit his particular situation. For example, an optimum-cost bookmobile routing may have to be altered because patrons at the particular stop may not be able to be there at the time suggested by the lockset solution.

Additional restrictions can sometimes be incorporated successfully into a lockset algorithm. A computer routine has been refined by Schruben and Clifton for the solution of routing problems by the lockset method.
Figure 2. Near - Optimum Route

Route 1
Route 2
Route 3
Route 4
REFERENCES


3. Ibid., especially pp. 856-59.

ADDITIONAL BIBLIOGRAPHY


Katharine L. Ball

The Margaret Mann Citation in Cataloging and Classification is awarded in 1969 to Katharine L. Ball for distinguished service to librarianship through international activities in cataloging, teaching, publication, and participation in professional associations in Canada and the United States. A dynamic person, with alert grasp of principles and gifted performance, she has had profound influence on cataloging theory and practice in Canada and, with charming, enthusiastic leadership, has achieved agreement among Canadian and American catalogers.

Katharine L. Ball, right, is presented the Margaret Mann Citation by Arline Custer, chairman, Margaret Mann Citation Committee.

To be deemed worthy of being honoured by one's own country is surely, for even the most modest citizen, a source of immense gratification. Canadian librarians therefore rejoiced for Katharine Ball when, in 1967, the Government of Canada awarded her a Centennial Medal for distinguished service to her country. But to be
honoured by one’s professional colleagues, and especially by the professional association of another country, is surely—though in a different way—equally gratifying, and in 1969 librarians on both sides of our international border joined in applauding the award of the Margaret Mann Citation in Cataloguing and Classification to Katharine L. Ball, a Canadian, for distinguished service in librarianship.

Honours without achievement would be empty indeed, but in Katharine’s life achievements abound. A Torontonian born and bred, Katharine obtained her B.A. degree in Modern Languages from the University of Toronto in 1926, proceeding immediately for further studies in English literature to Oxford where she received the B.A. degree in 1928 (M.A., 1951). Returning to Canada in 1928, she joined the staff of the University of Toronto Library where, for fourteen years, she served in the Circulation and Reference Department. Working closely with teaching staff and students during this period, she acquired a thorough knowledge of the strengths and weaknesses of the catalogues and classification scheme in meeting the needs of readers, an experience which later served her well in forming her judgment as a cataloguer.

In 1942, Katharine Ball enlisted in the Royal Canadian Air Force (Women’s Division) and was posted overseas, serving with the Historical Section in England, and later, with the rank of Squadron Officer, as the Women’s Division Staff Officer with No. 6 Canadian Bomber Group. When the war ended Katharine returned to a cataloguing position in the University of Toronto Library, enrolling in the following year in the Library School in order to prepare for appointment as Head of the University Library’s Cataloguing Department.

Katharine brought to her new position not only her newly earned B.L.S. degree but an energetic and broad intelligence, a clarity of thought and expression, a sound and practical sense of judgment, and a happy ease combined with a decisive quality of leadership in her relationships with people. Her reputation as an outstanding cataloguer and talented administrator quickly grew, and the name of Katharine Ball, not unexpectedly, was proposed when an opening occurred in 1951 for a teacher of cataloguing and classification in the University of Toronto Library School. Appointed to the Faculty of Library Science as Assistant Professor, she was promoted to the rank of Associate Professor in 1959 and to Professor in 1964. Always active in the affairs of a university where segregation of the sexes has been a long time a-dying, Katharine was the first woman to hold office as President of the University of Toronto Faculty Club.

With an authority derived from a sure grasp of her field, Katharine Ball has taught the principles of cataloguing and classification in both the B.L.S. and M.L.S. programmes to hundreds of students, many of whom, as practising librarians, repeatedly seek her advice and guidance on problems encountered in their work. Responding generously as she does to such appeals, Katharine puts into practice her conviction that the responsibilities of a professional school do not end in the
classroom but extend to the profession at large, and are discharged as much by individual consultation as by giving active support and leadership to the work of professional associations.

Katharine Ball's teaching career spans a period of unprecedented growth and change in the world of librarianship, a period during which international communication and cooperation have overcome so many of the barriers which, not so very long ago, isolated us from each other. Through her membership in library associations at the provincial, national, and international levels and through her publications Katharine has contributed immeasurably to the dissolution of our separateness, functioning as challenger, interpreter, conciliator, consolidator, and coordinator—a moving and irresistible force.

The responsibilities of office Katharine Ball has always discharged with an enviable "presence," but none more brilliantly than those of President of the Canadian Library Association (CLA) in 1968/69, a year of intensive self-examination within the association and one also of significant change. At the national level she has served as Chairman of the former Cataloguing Section of CLA, and within the Ontario Library Association as Chairman of the former Ontario Regional Group of Cataloguers. She has also played an active part in the relatively youthful Canadian Association of Library Schools. Long a member of the American Library Association, she has served on Council, as Director-at-large of the Teachers' Section of the Library Education Division, and on various committees of the Cataloging and Classification Section, including chairmanship of its prestigious and hard-working Cataloging Policy and Research Committee (1959/60) and of the Committee on the Award of the Margaret Mann Citation (1964/65).

Katharine Ball's deep interest in code revision has added a demanding but rewarding dimension to her teaching activities. Appointed to the Advisory Board of the Catalog Code Revision Committee, she has spoken with keen and practical insight at the many meetings, institutes and conferences held to explain and discuss the proposed new rules. In 1959, she attended the London meeting at which the possibilities for success of an international conference on cataloguing principles were explored, and when the holding of such a conference in Paris was announced by the International Federation of Library Associations, Katharine Ball was appointed as the official delegate of the Canadian Library Association. To acquaint the Canadian delegates with national opinion on the principles to be considered, a Canadian Institute on Cataloguing Principles and Rules was held, under Katharine Ball's chairmanship, immediately preceding the CLA conference in June 1961. Armed with the views of her Canadian colleagues, thoroughly familiar with the American position, and sympathetic to the views put forward by other countries, Katharine Ball not only contributed to debate, as head of the Canadian delegation, but later published a masterly report of the proceedings. Throughout the long years of code revision activity, which finally culminated in publication of the Anglo-American Cata-
Ioging Rules, Katharine derived perhaps the greatest personal satisfaction from a telephone call which she received from Donald Cook, on behalf of Wyllis Wright, in the midst of the CLA's Calgary conference in 1966, asking her, as RTSD's Liaison Representative to CLA's Technical Services Section, to obtain the official permission needed to include the name of the Canadian Library Association on the title-page of the long-awaited code. Her hopes for full recognition of Canada's part in preparing the new rules, and of Canada's acceptance of them, were realized in that moment. And when the new "blue book" replaced the old "red book" on cataloguers' desks, it was Katharine Ball who organized, under the auspices of the University of Toronto School of Library Science, one of the first open meetings to discuss the published rules.

Katharine's energy and wealth of experience, however, have not been channelled into her teaching and association work alone. For eighteen years she served her home community, Richmond Hill, Ontario, as a member of the local Public Library Board, holding office both as Chairman of the Board on several occasions, and as Chairman of its Building Committee.

Katharine Ball's gift for friendship knows no national boundaries. Warmly appreciative of her love of laughter, of family, of her profession and her country, her friends are everywhere. If usage condoned—and cataloguing rules permitted—her admiring colleagues might well condense the many achievements and attributes of the eighteenth recipient of the Margaret Mann Citation into the following "Heading for persons":

Ball, Honourable Katharine Lucy, Lady.
Richard M. Dougherty

Ashby J. Fristoe
Associate Librarian for Technical Services
University of Hawaii Library
Honolulu, Hawaii

The Resources and Technical Services Division of the American Library Association presents the Esther J. Piercy Award for 1969 to Richard M. Dougherty in recognition of his contributions to technical services. In the less than ten years he has served his profession, he has shown unusual promise of leadership and productivity in research, teaching and administration. His work is distinguished by imagination and skill. His scholarship and seriousness of purpose reflect the high standards of the person in whose name this award has been created.

The Esther J. Piercy Award is presented to Dr. Richard M. Dougherty by Ruth F. Carnovsky, chairman of the Piercy Award Jury.

In the relatively short time of thirty-four years, Richard M. Dougherty has had a full life. He has earned a living as a steel worker, sailor, and librarian. He could have been a forest ranger had he not turned elsewhere. Administrator, writer, editor, operations analyst, scholar, teacher, consultant, and whilem athlete, he is a many-faceted man.

Volume 13, Number 4, Fall 1969
Born in 1935 in East Chicago, Indiana, Dick Dougherty was reared
in the shadow of the steel mills. After graduation from high school,
he worked briefly as an open hearth laborer and then enrolled at
Purdue University in 1953. The Korean War interrupted his formal
education, and he served in the U.S. Navy from 1954 to 1956. It was
in the Navy that he had his first taste of library work. He served in the
serials and the circulation departments of the U.S. Navy National
Security Agency Library during 1955 and 1956. He worked his way
through school with another stint at the steel mill and as a Student
Assistant in the Reference Department at the Purdue Library.

While at Purdue his activities were not entirely limited to studies
and work. It was during this time that he joined the wrestling team
and, working with customary energy, developed the physique of an
athlete. Although he majored in forestry, upon graduation in 1959
he found the pull of the library stronger than that of the woods and
decided to be a librarian. He chose the Rutgers Graduate School
of Library Service for his professional training and was greatly helped
and influenced by Ralph Shaw. Much of his later success can be attributed
to a keen, analytical approach developed under Shaw's aegis. While at
Rutgers he also worked for Viola Maihl at the Linden (N.J.) Public
Library as a Library Trainee. Miss Maihl and her fellow librarians
still remember him as one of the best trainees Linden has ever had. He
was an excellent student at Rutgers and his efforts were rewarded by
election to Beta Phi Mu.

Dick received his MLS degree in 1961, staying on to teach as a
Research Associate while working for his PhD. The subject of his
dissertation was the scope and operational efficiency of information
centers as illustrated by the Chemical-Biological Coordination Center
of the National Research Council. While working on his dissertation,
he had his first, long look at automation, and it was here that he de-
veloped a healthy skepticism for the frequently heard predictions of the
millennium in the library world soon to be wrought by automation.
This contact with it, however, did not sour him on automation, as his
later activities prove. On the contrary, he has been very active in this
area and in April 1969 was selected as one of the fifteen newly established
Fellows of the Council on Library Resources. The selection was based
on the candidate's qualifications and the significance of his proposed
project, namely, to investigate programs now in operation, or planned,
which utilize automation techniques to provide individualized informa-
tion services to faculty and students. His selection is an acknowledge-
ment of his strong leadership potential as well as his familiarity with
automation.

With his new PhD in hand, he arrived in the summer of 1969 in
Chapel Hill, North Carolina, as the Head of the Acquisitions De-
partment at the University of North Carolina Library. While in this
job, he began to apply much of the theory he learned in library school.
The Acquisitions Department at the University of North Carolina

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Library Resources & Technical Services
Library has not been the same since. And the change was certainly for the better. He streamlined procedures in ordering, searching, serials, binding, filing, and bookkeeping, and he made extensive use of xerography in many phases of acquisitions. It was during this time that he began to write and publish. Several of his articles were based on procedures he initiated during this period, and he and Fred Heinritz wrote Scientific Management of Library Operations, an enumeration of the methods analysis techniques available to operating level management. This book has been used as a textbook in management and administration courses in many library schools.

While at Chapel Hill he developed an interest in acquisitions and this culminated in his appointment as Assistant Editor for Acquisitions of Library Resources & Technical Services. This appointment brought forth several annual review articles covering developments in acquisitions. His interests have not been confined to acquisitions, however. In addition to his editorial duties on LRTS, he has also been Department Editor (New Architectural Dimensions) of the Library-College Journal since 1967. Capping his editorial activities was the recent announcement that at the end of this summer he is to succeed David Kaser as editor of College & Research Libraries.

In 1966, after three very productive and successful years at Chapel Hill, he made another move up the ladder, accepting a position as Associate Director of Libraries, University of Colorado Libraries at Boulder, Colorado. He immediately became involved in the planning leading to the establishment of a processing center for Colorado academic libraries. The formal proposal for the funding of this project was prepared by Dick and his new boss, Ralph Ellsworth. It was submitted to the National Science Foundation and in October 1966 the Foundation awarded a grant for a feasibility study of the project. The project received additional funding and is presently in its third phase, a one-year trial operation. Dick has been intimately involved in the project from its inception. The project has also generated additional grist for his writing mill as a perusal of the recent literature will show. He has also written articles on library buildings, reclassification, cataloging costs, and manpower utilization.

Dick Dougherty always has several pots boiling simultaneously and from one burner has come the recently published report, Investigation Concerning the Modification of the University of Illinois Computerized Serials Book Catalog to Achieve an Operative System at the University of Colorado Libraries, with James G. Stephens as co-author. It has been described by reviewers as an excellent case study and a candid statement of the problems encountered during an attempt to adapt programs and a data bank developed in another library. It is also a measure of Dick Dougherty's grasp of the problems as well as the opportunities of automation.

His activities have not been confined to writing or administration. He has also found time to teach at four library schools (Rutgers,
Syracuse, Southern California, and North Carolina), act as library building consultant, and be a very active participant in American Library Association affairs. In 1967-68, he was chairman of the Melvil Dewey Award Jury. He has been very active in the Resources and Technical Services Division and has served on the Executive Committee of the Acquisitions Section (RTSD) since 1966. He was chairman of the Nominating Committee, Acquisitions Section (RTSD), for 1966-67, and is currently a member of the Technical Services Costs Committee (RTSD). Active also in the Information Sciences and Automation Division, he has been chairman since 1968 of the Committee for Dissemination of Information. And finally, he was recently elected to membership on the American Library Association Council for the term 1969-73.

As the citation indicates, Dick Dougherty possesses a great capacity for work; and this is combined with a bright, inquiring mind, an ability to cut to the heart of a problem, a receptivity to new ideas and suggestions, enthusiasm, self-confidence, imagination, and a good sense of humor. And particularly important, he is loyal, not only to his superiors but also to his subordinates. It is this last quality, quite likely, which enables him to get so much work accomplished; the loyalty is reciprocated. But Dick's life is not all work. He is a fisherman, good poker player, skier, an erratic golfer, and a scourge on the handball and paddleball courts. He has a lovely wife, Carole, two pretty daughters, Jill and Jacqueline, and a sturdy son, Douglas.

The initial recipient of the Esther J. Piercy Award can certainly serve as a model for young librarians in the technical services field, and it is to be hoped that many of them will follow in his footsteps. Fortunately for the library profession, he has many productive years ahead. If the past is any portent, his future activities will not be limited to technical services.
A Tribute to Elizabeth Rodell

FOR SEVEN YEARS RTSD and its officers became accustomed to living off the fat of the land. Between September 1961 and October 1968, we were cajoled, nurtured, whipped, consoled, and nursed by our able Executive Secretary, Elizabeth Rodell. Then last fall she left us to return to Rice University as head cataloger and assistant director for technical services. During her years of service the Division waxed, more than doubled in size and complexity, went forth and slew many dragons while taming hosts of others, all under the able generalship of Elizabeth, our Saint George.

Now we have experienced a lean year in which we have been deprived of Elizabeth's expertise in helping us find our way through the forest, a year in which we might even have observed a strain of wilderness developing among the dragons we thought we had tamed. While Carol Raney's recent appointment assured us that our seven fat years will not be followed by seven lean ones, this past year has made it clear to all of us how much Elizabeth contributed to the work of this Division and its stature, and more particularly and to the point, how much we miss her able direction. It would be ignoble and unseemly for us to let this occasion pass without giving tangible expression of our gratitude to our mentor, guide, and friend.

On behalf of all the officers, present and past, of the host of committee members, past and present, and of all the members of this Division, collectively and individually, it is my privilege and honor to offer you this token of our esteem. 'Tis a small thing, to be sure, but we hope it says to you what we want most earnestly to say. We do appreciate all that you have done for us heretofore, and all that we have reason to expect that you will continue to do for us in the future. But most especially of all, we just want to say how much we all love you.

* Presented by Carlyle J. Frarey, Chairman, Cataloging and Classification Section, at the membership meeting of the Resources and Technical Services Division, Atlantic City, New Jersey, June 23, 1969.

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Nine Regional Groups have reported fifteen programs since the last report, and once again these cover many areas of technical services. The most popular subjects for programs are acquisitions, cataloging of nonbook materials, and applications of computers to technical services (three programs each) followed by the Anglo-American Cataloging Rules and centralized processing and cataloging (two programs each), and classification and reclassification and general discussion (one program each).

The Southern California Technical Processes Group, Doris H. Banks, chairman, held three meetings in 1968/69. The first program was "A Programmer Looks at Librarians" presented by David N. Sheldon (University of California, Irvine). In the spring, an all-day meeting devoted to acquisitions activities was held at the San Diego State College Aztec Center. Michael Costin moderated a panel discussion by representatives of vendors and of different types of libraries. The final meeting was on the topic of commercial processing services, and these were discussed from both vendor and user viewpoints.

The Technical Services Section of the Connecticut Library Association, Nancy Castagnetti, chairman, held a fall dinner meeting with two speakers, Charles E. Funk, Jr. and Henry Gilkes, both from the Connecticut State Library. Funk spoke about the recently started Connecticut Union Catalog and Gilkes described the progress of the State Library toward centralized cataloging. At the spring meeting, William Gidding (The New York Public Library) presented a paper on "Cataloging and Classification of Phonograph Records, A Practical Approach." Against a background history of the development of the Phonograph Record Collection of The New York Public Library, he discussed classification, use of Library of Congress methods, and the make-up of actual catalog cards through a lively and informative blackboard demonstration.

At its annual business meeting, the Technical Services Division of the Mountain-Plains Library Association, Esther Shubert, chairman, reviewed the Council of Regional Group Sessions held at the American Library Association Conference in Kansas City in addition to the business of the Division.

The New England Technical Services Librarians, Catherine McCarthy, president, held its fall meeting in conjunction with the annual conference of the New England Library Association. The topic was
“Application of the Anglo-American Cataloging Rules,” and the speakers were Mrs. Dorothy Ladd (Boston University) and Ruth S. Leonard (Simmons College). Miss Leonard reviewed the background of the rules, describing them as both evolutionary and revolutionary. She also noted that the rules for descriptive cataloging have not changed substantially except for the author statement. Mrs. Ladd observed that if a library uses Library of Congress cards, even if it does not use the new rules, it must know enough about them to know what it is not accepting. She reviewed the changes in detail and said that only 15-20 percent of the rules are involved in changes. The spring meeting was held in Fitchburg, Massachusetts, and included tours of the Fitchburg Public Library in addition to the program: “DG versus LC—Why and Why Not.” The speakers were Katherine Dwyer (Worcester Public Library), who spoke for the Dewey Decimal Classification as probably the best for the average public library since she felt it is simpler for public use, easier for catalogers, and an easier one to use to train untrained help; Robert Agard (Bennington College), who felt that Dewey is more effective for a browsing undergraduate collection in a small or medium-sized college library; and Natalie Nicholson (MIT Libraries), who discussed the process MIT is using to change from Dewey to LC and why the decision to change was made.

The spring meeting of the New York Technical Services Librarians, Joseph A. Rosenthal, president, had as its topic, “The Book Dealer’s Role in a Library’s Technical Services Program: Recent Innovations in Selection, Blanket Orders, Books with Cards, etc.” Tom Martin (Richard Abel & Co.) discussed his company’s approval program and described it as a program to provide books which fit the library’s need. It is a selection tool, but is not a substitute for selection. Brett Butler (Stacey Division, Bro-Dart) described his company’s books-coming-into-print program. This provides English language materials on approval, is a computer based system, utilizes customer profiles, and provides cards with the books if desired. On the spring tour the group visited the Somerville, New Jersey, plant of the Baker & Taylor Company, one of the country’s largest book wholesalers. In addition to tours of the plant, the group heard presentations about the Automated Buying System for Libraries and the University and College Library New Book Service.

The Northern Ohio Technical Services Librarians, Dorothy H. Loomis, chairman, had as their spring meeting program topic “Anglo-American Cataloging Rules and their use at the Library of Congress.” Paul W. Winkler (Library of Congress) was the speaker and discussion leader.

The Ohio Valley Group of Technical Service Librarians, Norman F. Clarke, chairman, held its 1969 annual two-day meeting at Miami University. Speaking to the topic of “Current Acquisitions and Order Procedures for Large and Small Libraries” were Peter Spyers-Duran (Western Michigan University) and Mary Jane Carr (DePauw University). Curtis E. Higgins (The Ohio College Library Center) dis-
cussed “Mating MARC II with OCLC,” particularly from the point of view of a pilot project which could set a pattern for other states. Panelists speaking to this same topic were Betty Wasson (Western College for Women), Leo Rift (Bowling Green State University), and Harold Apel (Marshall University). The meeting also included tours of the McGuffey Museum, the McGuffey Laboratory School Media Center, King Undergraduate Library, and the acquisition and cataloging departments of the Alumni Library.

The Tennessee Technical Services Librarians, Rachel Chambers, chairman, heard Carl T. Cox (University of Tennessee, Knoxville) present a paper on “The Cataloging of Nonbook Materials: Basic Guidelines,” at their spring meeting. The rapid influx of nonbook materials into all types of libraries has made the development of uniform methods to catalog these imperative, but there is no system now applicable to all forms of nonbook materials. Guidelines were suggested for call number, main entry, contributor’s statement, imprint, physical description, notes, tracings, and general card form.

The Texas Regional Group of Catalogers and Classifiers, Bradley C. Maxim, chairman, held its 21st annual meeting in March during the annual convention of the Texas Library Association. Two papers were presented: “Utilization of Machine Readable Data in Cataloging” by John Corbin (Tarrant County Junior College) and “Cataloging and Processing of Audio-Visual materials” by Virginia Taylor (Houston Independent School District).
President’s Report

CAROL H. RANEY, Acting President

When incoming Resources and Technical Services Division president, Miss Margaret Brown, described “RTSD in an Age of Change” at this time last year, I am sure she did not foresee all of the changes which actually have occurred. It is a tribute to the interest and dedication of the membership of the Division that they could carry on their activities in a year when the Executive Secretary, Mrs. Elizabeth Rodell, resigned for reasons of health and the President, Miss Brown, was sidelined by a broken hip just before Midwinter. We all offer our thanks to Don Culbertson who assumed the duties of RTSD Executive Secretary after Mrs. Rodell’s departure from Headquarters in October in addition to his responsibilities to the Information Science and Automation Division. We also pay special tribute to Erlyenne Meuer, Mrs. Rodell’s Secretary, who carried on the work of the RTSD office in Chicago with dedication above and beyond the call of duty.

Much of the work of the Division was carried on by the fifty-two committees of the Division and its four sections: Acquisitions (Allen Veane, Chairman), Cataloging and Classification (Carolyn Frace, Chairman), Reproduction of Library Materials (Joseph Treitz, Chairman) and Serials (Charles LaHood, Chairman). Seventeen of the committees are charged with organizational matters, e.g., bylaws, nominating, etc. Four committees were abolished during the year and several more will be soon, since they have accomplished the purpose for which they were formed. Three new committees came into being during the year. In May the Planning Committee (David Weber, Chairman) reviewed the organization of the Division and made recommendations to the Board of Directors at Atlantic City on the retention, abolition, and combination of divisional units. At the committee’s recommendation the Board instructed appointing officers to add at least one junior member to each Division committee.

As I reviewed the work of the Division this year, I was struck by two major areas of activity. These are the publishing of committee projects and the study of standards. It is appropriate that results of committee activity be published. Basically our business as librarians is bringing people and information together.

The Acquisitions Section Committee on Guidelines for Book Purchasing Study (Carl Jackson, Chairman) has completed its work and the resulting study entitled, "Purchasing Library Materials in Public and School Libraries," by Evelyn Hensel and Peter Veillette will be issued as a divisional publication by the ALA Publishing Department shortly.

A new edition of the International Subscription Agents; An Annotated Directory revised by a joint committee of the Acquisitions and Serials Sections

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An Acquisitions Section committee chaired by Mrs. Eleanor Morrissey is investigating the need for an acquisitions textbook.

The cataloging and classification Section committee on Audio-visual Media in Libraries (Richard Darling, chairman) has recommended the preparation and publication of a manual on cataloging of audio-visual media in libraries.

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The other major area of concern to the Division this year is standardization. A number of committees worked on this problem. The Bookbinding Committee (Frazer Poole, Chairman) continues to promote the Provisional Performance Standards for Library Binding. The Technical Services Cost Ratio Committee (Mrs. Helen Tuttle, Chairman) was concerned with the development of standard units of measure for planning and budgeting purposes.

The newly formed RTSD International Relations subcommittee is already considering the problems of cooperation and standardization at the international level. Sarah Vann is chairman of this committee.

The Resources and Technical Services/American Book Publishers Council Joint Committee (Stephen Ford, Chairman) and the RTSD/ISAD Interdivisional Universal Numbering Systems for Library Materials Committee
(Warren Haas, Chairman) are interested in the standard book numbering concept. The ALA representative to the National Microfilm Association (Charles LaHood) reported that organization has an intensive standards program, too. For example, one of its committees is recommending a standard font of letters and symbols for use in engineering drawings intended for microfilming.

The Cataloging and Classification Section Committee on Cataloging of Children's Materials (Mrs. Priscilla Moulton, Chairman) called for acceptance of the Library of Congress cataloging of children's materials as the national, uniform standard. The Committee on Audio-Visual Media in Libraries of the same section is also discussing the need for standardization of handling of audio-visual materials. The Descriptive Cataloging Committee (Paul Berrisford, Chairman) devoted its time to an expansion and interpretation of another standard, the Anglo-American Cataloging Rules.

The Acquisitions Section Bookdealer-Library Relations Committee (Murray S. Martin, Chairman) has wrestled with the problem of standardization and improvement of the quality of service of bookdealers to libraries.

The Division and some of its units presented interesting and varied programs for members at the Atlantic City Conference. Two preconference institutes were co-sponsored with other units, one on subject analysis and the other on acquisitions. A joint program meeting of the four sections on “The Crisis in Micropublication” proved of interest to all. A meeting on “Computer Based Book Catalog: a Candidate for Photocomposition” sponsored by the Book Catalogs Committee also drew a large and interested audience. The Division co-sponsored with the Reference Services Division and the Information Science and Automation Division a meeting on networks entitled “Resources and Services; Expanding Modes of Access.” The Council of Regional Groups held a workshop for information exchange among officers of these twenty-nine local RTSD groups. The six discussion groups within the Division continued to provide an informal problem and solution sharing forum for the Division and Section members.

The year has been characterized by the sharing of information on technical service problems and solutions and the Division looks forward to continuing and expanding these vital activities.

Cataloging and Classification Section Report

CARLYLE J. FRALEY
Chairman

The year 1968/69 has been a fairly quiet one for the Cataloging and Classification Section. Most of its work has focused upon improvements in its organizational structure, continuing attention to its responsibilities for developing and improving standards for cataloging and classification, and planning for the 1969 Annual Conference and the Preconference on the Subject Analysis of Library Materials of which the Section is a co-sponsor.

Mindful of the urgent need within ALA to maintain the simplest organizational structure consonant with efficient discharge of its responsibilities, the Section has given considerable attention to its own internal organization over

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the past two years or so, and, this year, has effected some streamlining. At the membership meeting in Kansas City, the Committee on the Cataloging of Far Eastern Materials was discontinued after some years of relative inactivity on the premise that its functions could be assumed by other standing committees, notably the Committee on Descriptive Cataloging. If special expertise in Far Eastern materials is needed for the resolution of problems that may arise in the future, the use of consultants seems more economical and appropriate than continued maintenance of a standing committee. At the same time, the standing Committees on Classification, and on Subject Headings, were disbanded in favor of a newly established Committee on the Subject Analysis and Organization of Library Materials. Subsequently the Section initiated a recommendation that the Division's Bylaws Committee be given responsibility for the bylaws of the several sections as well as for the bylaws of the division itself. Appropriate sectional representation on the Divisional Committee will assure responsiveness to section needs at the same time that considerable unnecessary duplication of effort will be eliminated. Approval of this proposal was forthcoming from each of the sections and from the Division's Board of Directors, and formal membership action on this proposal is pending.

The major work of the section is carried out through its several committees. Some of these have annual functions, such as nominating candidates for section officers, selecting the recipient of the Margaret Mann Citation, and planning the annual conference program. As this report is written, election results for 1969/70 are not yet known, but the Margaret Mann Citation Committee (Arline Custer, chairman) has named Professor Katharine Ball of the University of Toronto's School of Library Science to be the winner of the Citation in 1969.

In January 1968, the section established an Ad Hoc Committee on Audiovisual Media in Libraries under the chairmanship of Richard L. Darling to prepare a proposal for a manual for organizing these materials in library collections should its study determine that such a manual is needed. The committee is hard at work on its study and expects to complete its work in time to make its recommendations to the Executive Committee at the Chicago Midwinter Meeting.

The Bylaws Committee has had no special work to do this year, but its chairman, Richard Johnson, has participated in the division's committee work of codifying all divisional and sectional bylaws for publication in an early issue of LRTS. As noted above, this committee will be discontinued when the membership approves, and its responsibilities will be assumed by the divisional committee.

The Ad Hoc Committee on the Cataloging of Children's Materials (Priscilla Moulton, chairman) is charged with establishing standards for this activity as it is carried out in libraries, processing centers, and commercial agencies. The committee completed its studies last fall, and the section has approved the committee's recommendation that Library of Congress practices as set forth in Cataloging Service, Bulletin 86, January 1969, be adopted as a national standard. Wide publicity has been given in the professional press this spring to this action, and it is hoped that adoption of this standard will reduce the variant practices that have emerged over the last several years. The committee's life has been extended for another year to enable it to exchange ideas and information with the Library of Congress on the practices, interpretations, and applications of cataloging for children's materials.
The Committee on Descriptive Cataloging, chaired by Paul Berrisford, is charged with approving changes in the Anglo-American Cataloging Rules on behalf of the section, and thereby on behalf of ALA itself. During 1968/69, the committee has devoted most of its attention to expansion and interpretation of AACR rather than to substantive revision of the code itself. It has also considered romanization tables for Arabic and Japanese but has taken no final action on these as yet. The committee is concerned with improving communications with the British and Canadian library associations, partners with ALA in the development and adoption of AACR, thus to expedite consideration of proposals for changes in the cataloging rules. Since publication of the code, real problems have arisen in coordinating proposals from the three associations, providing adequate time for their consideration and discussion, and making the decisions of the three associations available. It should be noted here that the committee's decisions concerning rule refinements and changes are promulgated in Cataloging Service, the bulletin issued periodically by the Library of Congress.

The Committee on Cataloging Policy and Research, of which Paul Dunkin is the current chairman, continued its study and review of developments in cataloging and classification on a broad front, including projects suggested by the RTSD Planning Committee. The committee's major responsibility is to ascertain what questions or issues require the attention of the section or one of its committees, and to encourage research in cataloging and classification and related matters. During 1968/69, a study of the use of nonprofessionals in university library cataloging by Joseph Rosenthal was completed under the auspices of the committee, and Mr. Rosenthal's report has been published in LRTS. Committee attention is also being given to a study of the need for a code for computer-based catalogs, following up on a suggestion by Andrew D. Osborn in his review of the Anglo-American Cataloging Rules.

During 1968/69, most of the work of the Committee on Subject Analysis and Organization of Library Materials (Paul Fasana, chairman) concerned plans for the Atlantic City Preconference on the Subject Analysis of Library Materials scheduled for June 19-21 at the Traymore Hotel. The Preconference is co-sponsored by the Section, the Information Science and Automation Division, and the School of Library Service of Columbia University, and is a follow-up to the 1952 institute on the same subject held at Columbia University. The objective of the sessions is to provide an interpretative overview of the state of the art of subject analysis as this has been developed since 1950. A program of eleven papers has been arranged, and it is hoped that this meeting will be as seminal as the 1952 discussions. Proceedings of the Preconference are to be published by Columbia University. In spite of the fact that this is the committee's first working year, it has had time to gather information on the use of subject headings in a sampling of 400 libraries, to prepare a preliminary tabulation and analysis of the results, and to formulate plans for a comparable questionnaire on classification to be distributed before the end of 1969.

Mrs. Jessica L. Harris, the section's representative to the Catalog Use Committee of the Reference Services Division reports that a study of on-going book catalogs from a user's point of view is now projected, such study to be analogous to the use studies of university and public library catalogs that have already been completed. And Virginia Drewry, ALA member of the Decimal Classification Editorial Policy Committee reports that the editorial work for Edition 18 of the classification, to be published in the spring of 1971, is now sub-
stantially complete, work on the index has begun, and editorial criteria for Abridged 10 (scheduled for publication in the summer of 1971) are now under discussion.

This year the Conference Planning Committee decided to join with the other three sections in RTSD in presenting a joint program concerning the crisis in micropublication as it relates to acquisitions, cataloging, serials, and the reproduction of library materials. This meeting is scheduled for Tuesday afternoon, June 24.

Although 1968/69 has not been a year of spectacular achievement—after all, it is neither possible nor desirable to develop and adopt a new code of cataloging rules every year—the section's day-to-day concerns with the substantive problems of organizing library collections for effective use has continued unabated. The chairman is grateful to his fellow officers, to the members of his Executive Committee, and to the chairmen, committee members, and sectional representatives by whose hands the work of the section is carried forward. Without their freely given counsel and hard work, the section could not discharge the responsibilities placed upon it by the American Library Association and its constituent divisions.

Reproduction of Library Materials Section Report

JOSEPH H. TEFY
Chairman

The year 1968-69 witnessed the end of several long-term projects, the continuation of others, and the initiation of several new ventures which should meet some of the emerging needs of librarians and administrators as academic and research libraries increasingly turn to microform and other specialized methods of reproducing library materials to enhance and supplement the basic book collections.

Concluded were the studies on simplified payments, photocopying costs in libraries, and interlibrary loan. The investigations in the first two subjects will be reported in LRTS, and the results of the third may be found in the newly published Interlibrary Loan Code.

Also completed was the first phase of studies by the Ad Hoc Telefacsimile Committee. This committee was then reconstituted as a standing committee of RLMS, and charged with collecting and disseminating information on facsimile transmission for libraries, and concerning itself generally with problems of remote reproduction of visual data. Miss Sharon Schatz, Library of Congress, will prepare and distribute an informal newsletter reporting the latest developments in facsimile transmission.

Continuing projects include the preparation of new editions of two standard reference tools in the field: Cosby Brinkley's Directory of Photoduplication Services and Microfilm Norms. Mr. Brinkley is gathering, through questionnaires, the material for the new edition, and a committee has been appointed to develop and prepare Microfilm Norms for publication.

RLMS, with the backing of RTSD, has reaffirmed its responsibility for and support of the USASI Sectional Committee PH5. This year the committee prepared the Standard Specification for Microfiches.
Internally, the Executive Committee restructured and strengthened the Policy and Research Committee. It also voted to abolish the Bylaws Committee, referring all future matters to the Division Bylaws Committee.

Three new projects have been started in cooperation with the Library Administration Division and the Library Technology Program. The LAD Section on Library Organization and Management is working with RLMS to define and provide guidance for a study on the organization of microform and photoduplication facilities. Its purpose will be to survey and evaluate the effectiveness of present methods of organizing microform collections, equipment, and facilities in libraries of varying types and sizes. The LAD Section on Buildings and Equipment and RLMS are jointly seeking support for a study on the planning of facilities and space for microform collections, equipment and services. Publication of a report on the equipment, space, location, and facilities required for various types of libraries is anticipated. The sections will provide advice and guidance for these studies, with the actual work being carried out by the Library Technology Program. An ad hoc committee has been appointed to design the third project, which is to be an evaluation of all roll microfilm cartridges now on the market. This study will also be conducted by the Library Technology Program.

Serials Section Report

CHARLES G. LAHOOD, JR.
Chairman

In cooperation with the Acquisitions Section, the Joint Committee to Review the List of International Subscription Agents completed its task and submitted copy to the ALA Publishing Office. The new second edition was nearly ready for sale by the last week in June 1969. Having completed its assignment, the Serials Section appointees to the committee have been discharged with the thanks of the membership.

In response to an often expressed wish on the part of the various members of the Serials Section for a better means of communicating with each other, the section was allotted some funds by ALA to prepare and distribute an internal Serials Section memorandum which has been given the name "Serials Intercom." Under the editorship of Miss Barbara Gates of Boston University Library, and with additional support by that library, the first issue appeared in December 1968. It is anticipated that this memorandum will be circulated on an irregular basis, depending on the amount of information available.

Elizabeth F. Norton, who had served as Assistant Editor for Serials to LRTS, resigned after serving with distinction since the Fall issue of 1967. Mary Pound, Serials Cataloger at the University of Texas Library, has accepted the assignment beginning with the Winter issue, 1969. In addition to her assignment as Assistant Editor for Serials to LRTS, Miss Pound continues to serve as chairman of the Duplicates Exchange Union Committee. The "Duplicates Exchange Union consists of a group of libraries, each of which agrees to mail out once or more a year to other libraries, the union lists of serials material in usable condition which it offers on exchange." Miss Pound and her committee have guided this program in a highly successful manner, and during the year
prepared an interesting and informative brochure explaining the activity to prospective members of the Union.

At the Kansas City Conference, a joint program sponsored by RTSD and ISAD was presented on the National Serials Data Program. This highly successful meeting, dealing as it did with serials, obviated the need for the section to sponsor its own program meeting.

The Executive Board continued discussion on the proposal to compile and publish a directory of serial librarians. It was finally agreed that the undertaking was perhaps too extensive a task for a volunteer committee, and would not necessarily serve the purpose for which it was intended in timely fashion. Explorations were made with ALA Headquarters staff to include information as part of its membership directory which would more precisely indicate a member's specific professional competence, rather than his particular interests in the field. While the ALA Headquarters staff did not appear optimistic about adopting such a proposal, it is anticipated that further efforts will be made along this line.

The Serials Section Discussion Groups continued to function, with the discussion group for large research libraries and that for medium-sized libraries each holding a meeting at the Atlantic City Conference. The meetings of these groups serve a useful purpose for interested members of the section who join together in a discussion of those problems which present more than usual interest to them. The Discussion Group for Large Research Libraries, for instance, discussed problems connected with the National Serials Data Project.

In a continuing effort to retain a functional organization, the Executive Board abolished, at its own request, the Ad Hoc Committee on U. S. Congresses and Conferences Without Fixed Headquarters.

The Serials Section, in cooperation with the three other sections of RTSD, sponsored a joint program meeting at the Atlantic City Conference entitled, "The Crisis in Micropublication." Dr. Carl E. Nelson, Associate Consultant for Yerkes-Wolfe Associates, Inc. and Optical and Graphic Image Systems, International Business Machines Corp. was the principal speaker. A reactor panel to Dr. Nelson's talk included Karen Bendorf, Stanford University, David Nevin, Washington University Libraries, St. Louis, Mo., and Charles G. LaHood, Library of Congress. Allen B. Veaner of Stanford University Library presided.

Council of Regional Groups Report

JANE ROSS MOORE
Chairman

The activities of the Council culminated at the annual conference with the traditional Council of Regional Groups Workshop and Luncheon. The workshop program was divided into two sections, The Regional Groups and ALA and The Regional Groups within Their Regions. In the first section, Doralyn Hickey spoke about "Regional Groups and LRTS," Arline Custer discussed "Regional Groups and the Margaret Mann Citation," Sarah K. Vann presented "Regional Groups and International Visitors," and Carol Raney commented on "Regional Groups and RTSD." In the second section, past or present officers described
regional groups whose activities have been particularly significant during the past year: Southern California Technical Processes Group, Herbert K. Ahn; New York Library Association Resources and Technical Services Section, A. Elizabeth Crosby; Ontario Library Association Resources and Technical Services Group, Conrad Reitz; and Tennessee Technical Services Librarians, Elizabeth S. Greer. At the luncheon, the guests of honor were Katharine L. Ball, recipient of the Margaret Mann Citation and Richard M. Dougherty, recipient of the Esther Piercy Award. Council members also met the new Executive Secretary, Carol Raney, the incoming President, Carl Jackson, and renewed acquaintance with the previous Executive Secretary, Elizabeth Rodell.

Since Council members meet only at the annual conference, business during the year was carried on through correspondence. In addition to the three general mailings, Council members received a list of RTSD members in their geographical areas. Three regional groups requested suggestions for speakers on specific program topics. Correspondence was initiated in reference to the possible affiliation of additional groups.

Two "Regional Group Reports" describing the programs and activities of the groups were prepared for publication in LRTS.

It is reported with regret that the Ontario Library Association Resources and Technical Services Group ceased to exist as of December 31, 1968, after forty-two years, because of the provisions of the new constitution of the Ontario Library Association. Its affiliation with RTSD, therefore, has also ceased.

Twenty-eight regional groups are now affiliated with the Council of Regional Groups. Of these, ten are independent organizations and eighteen are part of either a state or regional library association. The membership of the regional groups ranges from twenty to four hundred, with the number of meetings ranging from four per year to one every two years.

To Margaret Brown, Carol Raney, Erlyenne Meuer, and to each of the regional group officers, this report ends with a "thank you" for help and support throughout the year.

Decimal Classification Editorial Policy Committee Report

CARLYLE J. FRAREY
Chairman

In accordance with Article IV, Section 2, of the Regulations for the Conduct of Committee Business, it is my honor and privilege to submit the following report for 1968/69 on behalf of the Decimal Classification Editorial Policy Committee.

The committee held its customary two meetings in 1968/69. The annual meeting in October was held at the Library of Congress at which time Mrs. Marietta Daniels Shepard, who was reappointed to the committee on nomination of Forest Press, began her second six-year term as a member. At the same meeting Mrs. Shepard's three-year term as vice-chairman was reaffirmed to continue until the annual meeting in October 1969. The second meeting of the year was held in April at the Condado Beach Hotel in San Juan, Puerto Rico. Minutes of both meetings setting forth in detail the business transacted at each have been or are being distributed to all parties concerned.
During the year the committee has continued its review of drafts of schedules proposed by the Editor for Edition 18 and has given continuing attention to the implementation of criteria for the index. At its October meeting the committee recommended adoption of proposed schedules for Philosophy (100), Religion (200), Economics (350), Education (370), Commerce (380), Technology and Applied Sciences (610-649; 660-699), and the Fine Arts (700). Schedules for Technology (660-699) and for Business (650-659) were approved in 1967/68. Additionally, the committee has recommended adoption of the revised Area Table (Table 1) and proposed a new Auxiliary Table 8 to provide for author subarrangement where this may be needed. The only remaining schedule to be reviewed by the committee is the proposed phoenix schedule for Law (340-349). To provide time for this and to insure optimum development and refinement of the index, the committee recommended to the Directors of Forest Press that the publication dates for both Edition 17 and Abridged 10 be delayed for from six to twelve months, and Forest Press has agreed to do so. Edition 18 is now scheduled for publication in March 1971, and Abridged 10 will appear in June 1971. At the same time the committee has recommended to Forest Press that it consider publication of Edition 18 in three volumes to provide for greater ease of use.

The index to Edition 18 continues to be a matter of concern to the committee, and it has reviewed the recommended criteria carefully on more than one occasion. During the year the committee gave detailed study to an extended sample of the index prepared according to prescribed criteria and reaffirmed its recommendations for the design and style of the index. The committee also endorsed the Editor’s recommendations for solving a number of special indexing problems that emerged as the sample was being prepared.

At its April meeting the committee gave attention to plans for Abridged 10 and discussed at length the nature, scope, and purpose of the abridgment. Members of the committee have expressed increasing concern that the abridged edition is becoming larger and more complex with each edition so that it is increasingly more difficult to use and potentially less useful to a large number of those for whom it is intended. After careful deliberation the committee recommended to Forest Press that Abridged 10 be designed primarily for the classification of library materials in school and small public libraries in English-speaking countries and that its potential use as a teaching tool be a secondary consideration. The committee recommended further that the index to the abridged edition be modeled on that of Abridged 8 with modifications and improvements approved for the Revised Index to Edition 17 and in harmony with criteria that have been recommended for Edition 18. The committee expects to review detailed editorial criteria for Abridged 10 at its October 1969 meeting.

Last year’s report called attention to the adoption of a revised statement of responsibilities for DCEPC by Forest Press and the American Library Association and noted that the Regulations for the Conduct of Committee Business were being revised to reflect this change. Study of the Regulations by a subcommittee indicated the need for additional changes, and a revised set of regulations was adopted by the committee in April. Besides clarifying the function and responsibility of the committee, the revised Regulations amplify the reporting responsibility of the committee, provide for staggered terms of office for the chairman and vice-chairman, and discontinue the formal office of secretary, since Forest Press provides the secretariat for the Committee.
A highlight of the year was the opportunity presented by the San Juan meeting to talk with a number of Latin American librarians about their problems in the use of the Decimal Classification. Latin America was not included in the survey of foreign use several years ago, and librarians in that area have had less opportunity than librarians in some other countries to make their needs known. Although the time for these discussions was limited, the meeting was useful, and the committee believes that other meetings of this sort over the years will be helpful to the development of the classification.

As of June 30, 1969, Deo B. Colburn, long-time secretary to DCEPC retired from his post as business manager of Forest Press and appointed secretary to the Committee. His dedicated and helpful service to the committee through the years will be sorely missed. In harmony with the revised Regulations noted above, Mr. Colburn will not be replaced as secretary; however, the Executive Director of Forest Press, Richard B. Sealock will now meet regularly with the Committee in Mr. Colburn's place.

Members of the committee at the end of the year are Edwin B. Colburn, Virginia Drewry, Carlyle J. Frarey, Frances Hinton, John A. Humphry, Mary Louise Mann, Pauline A. Seely, Marietta Daniels Shepard, and William J. Welsh.
Seven volumes of the Universal Decimal Classification (UDC) relating to economics, land, co-operation, socialism, customs policy, trade, etc., are now available from the British Standards Institution (BSI).

The UDC is an international aid to information retrieval for the whole field of knowledge and provides a numerical decimal code for the systematic arrangement by subject matter of materials in the form of books, pamphlets, maps, films, and so on, and particularly for the arrangement of entries representing these materials in catalogues and bibliographies.

Versions of the UDC are now published in many different languages and BSI publishes an abridged and a full edition of the English version as part of BS 1000. The new sections form part of the full edition and comprise a systematic schedule with alphabetical subject index in each case. They are all sections of UDC 3, Social Sciences, Law and Administration, and an introduction to the whole of this is provided in UDC 3/308. The sections are:

- BS 1000/330: 1969 Economics
- 1000/333: 1969 Land and landed property
- 1000/334: 1969 Co-operation
- 1000/335: 1969 Socialism
- 1000/337: 1969 Customs policy
- 1000/38/382: 1969 Trade. Commerce

These sections may be obtained from the British Standards Institution Sales Branch at 101/113 Pentonville Road, London N.1. Prices are 2s extra, including postage, to nonsubscribers.
ERIC/CLIS ABSTRACTS

The following abstracts are based on those prepared by the Clearinghouse for Library and Information Sciences of the Educational Resources Information Center (ERIC/CLIS), University of Minnesota, 2122 Riverside Avenue, Minneapolis, Minn. 55404.

Documents with an ED number may be ordered in either microfiche (MF) or hard copy (HC) from ERIC Document Reproduction Service, National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014. Orders must include ED number and specification of format desired. A $0.50 handling charge will be added to all orders. Payment must accompany orders totaling less than $5.00. Orders from states with sales tax laws must include payment of the appropriate tax or include tax exemption certificates.

Documents available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151 have CFSTI number and price following the citation.


Institution (Source): Rutgers, The State University, Graduate School of Library Service, New Brunswick, N. J.

Sponsor: Public Health Service (DHEW), National Library of Medicine.

Describes Phase 1 of a project to explore the applicability of automatic methods in indexing drug information appearing in English natural language text. Two phases have been completed: (1) development of the automatic indexing method and its implementation and (2) creation of a machine searchable file for the storage of the index records generated through automatic indexing. Indexing is based partly on a stored dictionary and partly on the identification of text characteristics which can signal to the computer information to be indexed. The file stores document references with their associated index terms. In addition to assigning index terms to documents the computer program automatically assigns weights to the index terms to indicate their relative importance. The next two phases will involve design and implementation of the search program and the evaluation of the automatic indexing method.


Sponsor: National Science Foundation.

Reports a book-memory experiment, designed to measure certain impressions persons retain after a single examination of a book. The primary objective is to identify those characteristics of books which are often enough remembered to be of potential use as retrieval clues. Such knowledge could play an important role in design studies of future catalogs. The relative usefulness of various types of nonstandard book information for retrieving a specific work was determined. The other significant finding was that providing the average specific work requestor with an appropriate retrieval system to exploit his nonstandard information could reduce his expected search effort by a ratio on the order of 500 to one.


Institution (Source): System Development Corp., Santa Monica, Calif.

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A sample of users and nonusers of Volume 1 of the Annual Review was identified, and questionnaires were sent to nearly 3,000. Respondents were divided into three groups: those who had used the Annual Review, those who had only seen it or heard of it, and those who had not yet seen it or heard of it. Users differed from nonusers particularly on professional activity level, where they were uniformly higher than nonusers. The impact of the Annual Review is evident from the tendency of users to reexamine cited literature, to seek new cited literature, and to seek contact with the authors of cited literature. This study suggests that annual reviews have great potential for advancing many fields of inquiry.


Institution (Source): R and D Consultants Co.
Sponsor: Office of Education (DHEW), Bureau of Research.

This study analyzes cost factors, with a separate examination of the influence of typography on cost and the use of automatic error detection procedures. The utility of automated catalogs is also studied, based on data from a random sample of the shelflist of a medium-sized university library. An investigation of several large university and public libraries shows that the collections of mature libraries grow at a rate close to that of the Gross National Product, and the significance of this relationship is discussed. Numerical methods for determining useful ratios of the size of library files and the number of entry fields in the structure of the record are given and applied to the use of machine-readable catalog data in the production of bibliographies. Mechanization of cataloging is necessary and inevitable, and it is recommended that machine-readable catalog data be used to produce printed book catalogs and special-purpose bibliographies.


The report has three parts—a survey of public libraries, a study of the Orlando Processing Center, and an examination of processing needs in Florida. Recommendations: (1) administration of the center by the State Library or incorporating it as an agency separate from the Orlando Public Library, (2) need for a much larger effort in Florida, with processing offered to all public libraries and eventually to school and community college libraries, (3) development of a Union Catalog by the State, (4) categories of services offered by the Center to include full processing, cataloging only, and ordering but no processing, (5) an operation involving two separate computer systems—an administrative system for ordering and a card catalog system utilizing MARC tape, and (6) development of a price structure varying with the amount of service.

Lufkin, Richard C. Determination and Analysis of Some Parameters Affecting the Subject Indexing Process. September 1968. 55 p. ED 024 414. MF $0.25, HC $2.28.

Sponsor: National Science Foundation; Department of Defense, Advanced Research Projects Agency.

Describes a quantitative study of subject indexing as it is being performed by catalogers developing an augmented catalog as part of Project INTREX. Learning curves
for the average time taken to index technical documents on a per-page basis were derived. The average indexing times per page were also calculated and compared under several criteria pertaining to the nature of the documents.


Institution (Source): Providence Public Library, R. I.
Sponsoring Agency: Office of Education (DHEW), Bureau of Research.

Objectives were: (1) to uncover problems a public library might encounter in reclassifying from Dewey to Library of Congress, (2) to apply data processing to the tasks, (3) to establish procedures, and (4) to provide a cost estimate for a large collection. A pilot test involving 1,000 titles in the Providence Public Library was conducted, using the MARC I format in encoding all data. The procedures followed were sample preparation, copy preparation, computer run, book processing for the central library and branches, and card filing for the central library and branches. Mechanized procedures seem to be advantageous as far as personnel and time are concerned; however, more research is needed on cost. It seems most feasible for libraries to establish a cooperative reclassification project, with the tapes also forming the basis of a data bank for bibliographies and union lists.

Sammon, John W., Jr. Some Mathematics of Information Storage and Retrieval. June 1968. 34 p. CFSTI AD 679 362. MF $0.65, HC $3.00.

Institution (Source): Rome Air Development Center, Griffiss AFB, N. Y.

This report explains the following mathematical techniques which may be used for relating search requests to documents contained in a library: (1) Boolean Algebraic Retrieval, (2) Linear Statistical Retrieval, (3) Statistical Association Techniques for expanding a query and/or for expanding the set of retrieval documents, (4) Vector Space representation of the retrieval process, and (5) Discriminant Analysis Techniques.


Institution (Source): Case Western Reserve University, Center for Documentation and Communication Research.
Sponsor: Public Health Service (DHEW), Washington, D.C.

CSL proposed to deal with the problem of testing information retrieval (IR) systems by examining a number of processes involved in such systems, with particular attention to the human factor. It is hoped that the results will be useful in refining methodologies for experimentation and in providing clues for the more effective design and redesign of operating IR systems. The second part of the final report includes: (1) a summary of the experiments conducted, (2) a description of the method of analysis of results and a discussion of some problems encountered in analysis, (3) a description of the data base of the experiment in terms of questions, users, and answers, (4) results pertaining to each of the variables tested (sources of indexing, indexing languages, question analysis, searching strategies, and formats of output), (5) specific, generalizable, and speculative conclusions drawn from these results, and (6) recommendations for future research on testing retrieval systems and on establishing relations between testing and practice.


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This study was designed to explore the practicality of the Criterion Group Method of measuring indexing. These variables were examined: (1) size of document sample, (2) size of criterion group, (3) instructions to indexers and use of a vocabulary guide, (4) three methods of editing raw indici to make terms comparable, and (5) two methods of weighting indexers' scores. Scores earned by a set of eight professional indexers, by individual authors of the test documents, and, in some cases, scores for title sets or medical students' indexing were compared within selected treatments to measure the extent to which the detectability of differences was achieved by each treatment. The criterion group method can be a practical yardstick for a wide variety of uses.


The principal resource was the National Aeronautics and Space Administration (NASA) tape file which is the basis of "Scientific and Technical Aerospace Reports" (STAR) and "International Aerospace Abstracts" (IAA). The search systems used are described, pricing considerations are discussed, and detailed statistics of the operational functions are presented. Results are given on a user survey, with 144 responses from the 155 students for whom searches were run. In general, the students appeared satisfied. It was considered unfortunate that fewer than 40 percent of the respondents indicated an interest in entering business and industry, and it is suggested that some means be found to present significant data in simple terms to undergraduate students expecting to enter commerce, finance, and manufacturing.


An existing experimental document and reference retrieval system operating in batch processing, tape-oriented mode was converted to an on-line mode with user interaction. Objectives were faster response time, integration of functions, and system accessibility at user location. Realization of full benefits of the on-line concept, particularly maintenance of the document base, requires system redesign rather than extension of existing procedures. User reaction to the experimental system was favorable, although a variety of improvements were suggested for an operational environment.


Documentation of files, of file organization, and of forty-two of the modular program subroutines used in a pilot project devised by the Oregon State University (OSU) Computer Center to simulate procedures in the Acquisitions Department of the OSU Library. A total of 224 bibliographically verified requests for monographs, thirty vendor names and addresses, and sixty-two campus departments having library fund allocations comprise the main data base. Fixed field formats are used for bibliographic input; the vendor file uses a variable field input. Searching is on both fixed and variable lengths and the initial methods of accessing elements in the files are through

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table lookup, sequential match, and algorithmic search and retrieval strategies. The modes of interaction among the computer configuration, the programming system, and the user in the project are on-line, real-time, time-sharing, and conversational. Documentation of programs in this report assumes the use of a cathode ray tube terminal as the input/output device; however, these same programs have since been modified for use on the teletypewriter. An area of programming not included is the algorithmic search used for locating the main entry. This report documents work done from May 1967 through January 1968.

Storage and Retrieval of Information. A User-Supplier Dialogue. AGARD Extended Summaries 2. June 1968. 59 p. CFSTI AD 674 168. MF $0.65, HC $8.00.


Papers included are: (1) Communication and Secrecy in Science; (2) The Suppliers Point of View—Introductory Paper; (3) Four "New" Sciences: An Approach to Complexity; (4) Les Problemes Poses par le Vocabulaire Documentaire et l'Organisation des Dictionnaires et Thesaurus; (5) Mechanical Reading—Trends and Developments in Character and Pattern Recognition; (6) Non-numerical Mathematics and Data Processing; (7) Efficient Transfer of Textual Information; (8) On-Line Information Storage and Retrieval; (9) Manual Systems—TDCK Circular Thesaurus System; (10) Mechanized Systems; (11) An Introduction to the Study of Cost Effectiveness in Information Systems; (12) Selective Dissemination of Information; (13) Interactive Information Processing, Retrieval, and Transfer; (14) Man-Machine Interface; and (15) Education.

Survey of the Use of Source Abstracts and Source Index Terms in a Selected Group of Engineering Journals. Final Report. May 21, 1968. 71 p. CFSTI PB 179 048. MF $0.65, HC $8.00.


The results were derived from questionnaires circulated to subscribers to eighteen journals in engineering fields which currently publish "source abstracts" and "source index terms." Results indicate that 68.5 percent of individual subscribers and 60.2 percent of institutional subscribers make some use of published abstracts while 44.4 percent of individual subscribers and 44.1 percent of institutional subscribers make some use of published index terms.


Institution (Source): Case Western Reserve University, Center for Documentation and Communication Research.

Sponsor: Public Health Service (DHEW), Washington, D. C.

Studies on: (1) properties of files, including a study of the growth rate of a dictionary of index terms as influenced by number of documents in the file and a discussion of problems encountered in coding (classifying) different types of English words; (2) the nature of user questions which were searched in CSL, including a verbatim listing of the CSL questions and an index to them as well as a classification of the questions according to various criteria; (3) the relations between the system answers (documents retrieved as answers) and the questions of the user, including a textual study of documents submitted as answers and a study which attempted to optimize searching of the CSL files on the basis of known relevant and nonrelevant answers; and (4) a comparison of the CSL study with similar experiments conducted by Cyril Cleverdon in the Cranfield II project and Gerard Salton at Cornell University.
REVIEWS


Of necessity this book invites comparison with New Rules for an Old Game (1967), proceedings of a “workshop” (not a “colloquium”? on the new code at the University of British Columbia School of Librarianship, April 13 and 14, 1967. Each is a paperback; each costs $6.00; one has a snappy title and the other has a no-nonsense title; one is much more attractive as a physical object than is the other.

As to content: each has a philosopher and each has a pragmatist. Each touches on implementation in varying situations. Each gives highlights of the discussion following presentation of the papers. Finally, in many respects each is simply a rerun of the long series of papers and discussion in the institutes held during catalog code revision: Stanford (1958), Montreal (1960), Paris (1961). In each book truly new and helpful material is in an appendix.

The philosopher of New Rules for an Old Game is, of course, Seymour Lubetzky, and he opens the book with discussion of the philosophy on which the new code to a major extent rests. The philosopher of The Code and the Cataloguer is Andrew Osborn, and he closes that book with a misnamed “Summary” in which he deals largely with places in the code which fail to meet the test of its philosophy; also he looks to the future in which he sees the early demise of the card catalog and the ever-growing place for the computer—neither development anticipated by the code. The pragmatist of New Rules for an Old Game is Bernice Field and the pragmatist of The Code and the Cataloguer is Sumner Spalding. Both are logical, both are lucid, both go into great detail with many rules, both explain and defend the compromises dictated by the Library of Congress and the Association of Research Libraries.

Other contributors to the book are Sister Frances Dolores (academic libraries), Marian Sanner (public libraries), Denis Bagshaw (school libraries), Martha Shepard (union catalogs), and David Remington (centralized and commercial cataloging). Appendices include a table of comparative results in headings under the old and the new codes; a table of principal changes in descriptive cataloging; and LC statements on application of the new rules in the Library of Congress (Cataloging Service, Bulletins 79 and 80).

As in other discussion of the new code, in this book also there is much concern about the role of the Library of Congress both in development of the code and in its application by “superimposition.” To quote Osborn (p. 93): “At this point note should be made of a principle which the Library of Congress has for long been fond of stating, namely that it is ready to change its practice in any respect when it considers the future to be longer than the past. What bothers me about the present reluctance of the Library of Congress to change headings to a more desirable form is that it must be pessimistic about the length of the future. Is the productivity of the Lincoln Laboratory at the Massachusetts Institute of Technology really going to be less in the future than it has been in
the past? Will there be comparatively few studies of El Greco or Michelangelo in the years ahead? Will there be fewer editions of Alice in Wonderland than have appeared in the past? I sincerely hope that for the Library of Congress, as for all other libraries, the future is going to be longer than the past in these and other respects.”

Like New Rules for an Old Game, The Code and the Cataloguer will be of help primarily to new catalogers who were not around when the issues of code revision were in such great debate. Older catalogers will be helped most by Osborn’s remarks and the useful details in the appendix.—P.S.D.


Locating the O.P. book is a minor problem for the acquisitions librarian. The advertising columns of AB Bookman’s Weekly are open to his need, or he may select a dealer to search for him from the list of antiquarian book specialists by subject specialty in the AB Yearbook. The O.P. serial is a far more elusive target. Until Neverman’s first edition of this directory came almost unannounced and unreviewed into print in 1964, the antiquarian serials market was learned only by patient experiment and experience.

An enlarged edition of the directory which Neverman, Acquisitions Librarian of the State University of New York at Albany, originally compiled for his own use has just been published. It now contains material on 196 domestic and foreign sources which handle back issue periodicals as a major or minor part of their business, and also lists fifty sources for old newspapers and forty suppliers of O.P. government documents.

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To ensure accuracy, the compiler sent a questionnaire to all firms listed in his previous edition and to those recommended to him since its publication. Only the firms replying to the questionnaire were included in the new compilation. This may explain the omission of some well-known sources, such as the U. S. Book Exchange; their failure to respond is outweighed by the inclusion of sources of supply in Europe, Asia, and South America.

Information under each entry includes the full address of the source, whether back issues are a minor or a major part of its business, and whether the firm handles the original issue, a reprint, or a microfilm of it, or some combination of the three possibilities. It also indicates what languages and countries of publication, and what subject fields the firm specializes in. This subject listing is, in many entries, so lengthy that reading it completely with understanding is impossible. Fortunately, Neverman has listed the subjects in alphabetic sequence, so that one can locate a particular subject, even if it is difficult to read the entire scope note. Certain peculiarities that recur in a number of entries hint the subjects reported were suggested by the compiler’s questionnaire rather than initiated by the sources replying. This may account for such oddities as three dealers reporting they specialize in magazines dealing with North Dakota while only one handles magazines dealing with New York city and state.

The “other notes” section that concludes each entry often contains the most useful information because it is unique to that dealer. Not untypical entries are “An officer of the firm reports that he has any scientific periodical”; “The director of the firm reported having ‘left-wing’ and radical journals.”

The separate listings for the three different types of O.P. serials—periodicals, newspapers, and government documents—do contain some duplica-
tion of dealers, but each section has as many or more new names as firms duplicated in another section of the directory. The section for out-of-date newspapers was of particular interest to the reviewer because of the number of hitherto unsuspected sources of supply. The listing also raised an unanswered question: Why is Allentown, Pennsylvania, such a center for old newspaper sales?

Each section has its own index, by subject or by place of origin of the publications offered. The section for periodicals has both a subject and a language index.

The directory is a useful guide for the librarian who needs to acquire or who wishes to dispose of out-of-print serials. The reference librarian will also find it helpful in directing the public to a bibliographic market not generally well known.—Paula M. Strain, Head Librarian, Booz, Allen Applied Research Inc., Bethesda, Maryland.


It is a pleasure to review this excellent book primarily concerned with the discussion of the "intellectual factors" affecting the design of document retrieval systems.

The significance of the intellectual work that must form the basis of all retrieval systems has been only too frequently minimized in the discussion of both manual and mechanized systems. Lancaster makes a significant contribution by devoting the first nine chapters of his book to these underlying intellectual problems. He presents the reader with a well organized general overview, divorced of particular systems or methods of implementation. The discussion of subject indexing, search files and searching mechanisms, the current awareness function, performance criteria for retrieval systems, and index languages and their characteristics is included in these chapters. A considerable amount of the material stems from the Aslib Cranfield studies, a research project funded by the National Science Foundation from 1957 to 1966, and most of it has been published previously. However, here it is summarized in a useful, neat little package written in a style that is refreshingly lacking in obscure terminology and irrelevant and unnecessary jargon. The one possible omission in this part concerns the discussion of the behavioral problems related to relevance assessment and the post-Cranfield research activities which relate to them. While no exhaustive treatment was expected, a fuller explanation of the limitations inherent in the recall and precision ratios would have been useful.

The balance of the book is heavily based on Lancaster's recent experience with the MEDLARS evaluation program at the National Library of Medicine. While some of the material in the section relates to a specific system, there is also a great deal that is generally applicable to the evaluation of the operating efficiency of retrieval systems. Such things as designing the test program, the analysis and interpretation of the test data, the evaluation of the economic efficiency of a system, and problems of interaction between system and users are discussed.

The book is highly recommended for the person who is after an intelligent overview and it should be particularly useful to students enrolled in library and information science courses.—Susan A. Artandi, Associate Professor, Graduate School of Library Service, Rutgers—The State University, New Brunswick, New Jersey.

Minder, Thomas. The Regional Library Center in the Mid-1970's: A
The stated objective of this paper was to identify the major characteristics of the Pittsburgh Regional Library Center. Five areas are discussed: design parameters, characteristics of tools and systems now and in the near future, basic characteristics of the Center, the present state of development of the Center, and the major steps toward implementation of a system. Parameters include patron needs for appropriate, immediate information, the bibliographic unit of control, limited resources, and a 200-mile radius. The characteristics of the tools are divided into several subsections: storage (physical volume or microform), reproduction (xerography, TV, facsimile transmission, etc.), identification tools (card catalog, book catalog, punched cards, computer). The paper suggests the potential of the computer for bibliographic control and recommends centralization of such records. The author does not foresee the Center assuming an active role in the development of either new techniques or new technology.

The profile of the mid-1970's places the book in a predominant position, with microform being used primarily for journals and periodicals. The structure of the system will consist of three parts: a storage collection, a core collection of little-used, "research" materials, and a local community collection. Technical processing will be centralized and will depend on a computer-controlled bibliographic record. A list of the responsibilities of both the member libraries and the Center is given but not detailed, and the author has provided an outline of steps for implementation and a time-table.

As the title expresses, the intent of the author is not to provide an extensive description of characteristics, tools, or systems, but rather to introduce a concept, or concepts. The concept of the three-unit system (special studies collection, storage collection, and local collection) is the unique contribution, but it lacks adequate definition or development. There appears to be little new outside of this. The tone of the paper is one of extreme caution in regard to the computer and its potential. While this is undoubtedly an admirable quality, there is a general tendency to put all technological development on a "plateau." A great deal of the technological information is out-of-date and the chapter on the profile contradicts the state-of-the-art description in relation to computer potential. The paper is specifically oriented to the member libraries and there is a definite tendency to talk down to the audience. The unfortunate result is an uneasy feeling on the part of the reader that the author does not fully understand some of the basic concepts, techniques, and prerequisites of libraries or information centers.

In general, therefore, there is little in the paper to recommend it to the reader. Descriptive portions are superficial; the profile is narrow and relatively unimaginative; and the implementation self-apparent.—Ann F. Painter, Associate Professor, Graduate Library School, Indiana University, Bloomington, Indiana.


Until publication of Morrison's doc-
toral dissertation by ALA, the only hardcopy of this important work was available in photo-reproduced codex form from the University of California Library. Those who have wrestled with the 460-page-long codex will appreciate this paperbound monograph.

Students of the sociology of the professions and of administration science, as well as those engaged in research in librarianship—and academic librarians at all levels—should benefit from this study. The title accurately reflects the objectives of the study and the contents of this monograph. The study, however, has been revised and condensed from the original. Those familiar with the original will be disappointed to find that the comprehensive and valuable reviews of two literatures—"Previous Studies of the Professions" and "Previous Studies of Librarianship"—have been omitted. Some tables have been rearranged to advantage and are much clearer, possibly due to the advantage of printed copy over typescript, but many tables are omitted, such as Table 51 of the dissertation, "Persons Mentioned as Being Influential in Subjects' Decisions to Become Librarians." A study being conducted at present by Laurent G. Denis at Rutgers University is making use of this table and other data from the original dissertation omitted from the ACRL Monograph, which indicates that this edition is no substitute for the real thing. This reviewer is faced with a plus/minus conflict: some findings and the major conclusions are now available to the profession, presumably made palatable (by cutting) for practitioners and library school students, but the wealth of data in its entirety, the state-of-the-art resume, and a considerable amount of descriptive and interpretive information are still difficult to obtain in a readable and inexpensive format. One wonders why Morrison does not refer the reader to his dissertation, when appropriate, or better still, why the study was not published in its original form by ALA, a university press, or some other agency.

Some of the omissions seem natural when a dissertation is published in monograph form, such as the tortuous, sometimes dangerous, extensive "rationale" required to answer the usually all-too-obvious question "why?" that faculty enjoy putting to doctoral candidates. Much of the material which might fall into this category has been omitted. However this reviewer missed sections of speculation such as that which appears on page 116 of the dissertation in which Morrison discusses the recruitment and the role of undergraduate science majors in academic librarianship. His findings may not be conclusive on some of these finer points, but the intuitive findings of an experienced investigator, when presented as intuitive (as Morrison does) form an integral and often thought-provoking part of the research report. This is not to imply that this book suffers from the sterility so often encountered in survey reports; it does not.

The multivariate analysis of the "Interrelationship Among Factors" chapter in the original dissertation has been reduced in a curious way. In the original report four variables were controlled or held constant in the analysis (age, sex, social class origins, and personality inventory scores). In this monograph, however, Morrison discusses only the personality inventory scores in multivariate analysis as examples which "will give an idea of the complexity of the interaction of factors in the career of the academic librarian." Why bother? Why only the personality inventory scores and not the other variables? Furthermore, in the dissertation itself, Morrison's explanation of multivariate analysis is not clear; here a few lines in the text hardly explain this technique at all. Even those already familiar with nonparametric statistics will have to resort to a statistics textbook for an explanation.
of this abstruse technique. In view of the cutting done elsewhere, this section might well have been omitted altogether. It is incomplete and quite possibly misleading in its interpretation by readers not acquainted with statistical theory.

Readers are certain to note that the data used in this analysis were collected in 1958; thus the study presents the norms of ten years ago. Since the average age of Morrison's subjects was 50 years in 1958, approximately half should now be 60 years old and a substantial number of his total population may be retired. Morrison does attempt to bridge this gap in a chapter entitled "Developments Since 1960." In this chapter he concludes that studies published since 1960 suggest the following hypothesis: "If general demographic tendencies in the nation as a whole are taken into account, there is relatively little difference between the characteristics of the group of librarians studied here and those of their younger colleagues." The post-1960 research summarized by Morrison does not necessarily suggest this to this reviewer, but it is an interesting hypothesis. Morrison stated some ten years ago that his "present investigation is but a prelude to more intensive and specific studies." Perhaps the testing of this hypothesis is a good place to begin.

—Kenneth H. Plate, University of Toronto, Ontario, Canada.


A Guide to Computer Literature is, quite simply, exactly what the title says it is. As an introduction to the sources of information in the field of computer science, it is well organized, complete in the areas covered, and for the most part accurate. Unfortunately, there are omissions and digressions which detract from the value of the work. Pritchard has based his book on an exercise he wrote for the Library Association final examination at the North-Western Polytechnic School of Librarianship. Further study of computer literature sponsored by the Office of Scientific and Technical Information added to the original material. The origins of the book perhaps dictate its librarian's approach to the material and its decidedly British flavor.

The organization of the book follows the conventional division of the various forms of information into the standard primary, secondary, and tertiary categories. Within each category the materials in the same form are considered together as a group. This approach is not only valid, but is undoubtedly the method of greatest value to librarians. Computer scientists, who as subject specialists are less concerned with form, would most likely be happier with an organization which followed a subject classification scheme. The distinctions between academic, commercial, and miscellaneous periodicals, while perhaps important from a bibliographic standpoint, are probably lost on the subject specialist. Even Pritchard occasionally finds the differences arbitrary and difficult to ascertain.

One desirable characteristic of any survey of the literature of a field is completeness. One way to attempt to attain completeness is to examine thoroughly each of the traditional forms of literature. Pritchard has done this with a high degree of success. One important omission, however, is Computing Surveys, a new publication of the Association for Computing Machinery. While the first issue bears the date of March 1969, only two months before the publication of Pritchard's work, the advent of Computing Surveys was widely publicized in 1968. Even if Pritchard can be excused for not including this journal, the case does point out the unfortunate rapidity with which guides of this type go out
of date. Pritchard's reliance on an analysis of traditional forms of information seems to have led him to three serious omissions in his discussions, namely, computer program documentation, lists of data in machine-readable form, and the publications of computer user groups.

Much of the significant research in computer science is in the development of computer programs and programming systems. Some of this work is documented in the publications of the various computer manufacturers. University computer centers, trade publishers, and societies have also published in this area. As examples of this important source of information the following might be cited:

(1) *Catalog of Programs for IBM System/360 Models 25 and above.* Hawthorne, N. Y., IBM, Program Information Dept., Form C20-1619. (Periodically revised.)


(3) *Collected Algorithms from CACM.* New York, Association for Computing Machinery. (A loose-leaf service.)

The availability of data or information in machine-readable form is an important adjunct of much research in computer science. Science Associates/International, Inc. began a loose-leaf service in 1968 called *Directory of Computerized Information in Science and Technology.* Computers and the Humanities regularly lists sources of literary materials in machine-readable forms. These two and similar sources should have been discussed by Pritchard.

 Organizations which use computers have formed “user groups” usually along the lines of size and type of equipment or along the lines of types of applications. For example, SHARE represents users of large IBM computers who perform a significant amount of scientific computation. SHARE has two meetings each year with published proceedings. In addition, copies of significant correspondence between members or with IBM are collected and published monthly as the *SHARE Secretary Distribution.* While some of this material is admittedly of limited general interest, there have been significant contributions to computer science reported in these documents. Any survey of computer literature should discuss them.

A few inaccuracies were noted in the *Guide.* Pritchard states that Wiley publishes the *Annual Review of Information Science and Technology.* Wiley did publish volumes one and two, but Encyclopaedia Britannica published volume three in 1968. Pritchard reports the publisher of the *AFIPS Conference Proceedings* as Spartan Books. Spartan was the publisher until 1966; Thompson Book Company published the proceedings in 1967 and 1968, but AFIPS Press is now the publisher. Other errors seem to be the fault of a careless editorial review. The title of Chapter 20 is listed in the contents as “Directories,” but at the beginning of the chapter the word “Dictionaries” is used. The index contains an entry “WJCC (see Western Joint Computer Conference)” but there is no entry for the Western Joint Computer Conference. Several instances of incorrect page numbers were noted in the index.

An important lack in Pritchard's book is a discussion of computer science as a subject or of the literature from the user's viewpoint. Such a discussion would have been of great assistance to a user of the *Guide* and might have assisted Pritchard in avoiding the omissions cited above. On the other hand, the digressions into such things as BIP, CBI, and union catalogs seem to be of questionable value in a discussion of computer literature.
large public libraries, and some special libraries will find the Guide valuable but should keep in mind the rapidity with which works go out of date. Computer scientists will find the work of little value.—Donald R. King, Department of Computer Sciences, Rutgers—The State University, New Brunswick, New Jersey.


The *MARC Manuals* is really a four-in-one publication. While libraries using or considering using MARC tapes will certainly need and use all three of the manuals and the usability study, each of them is specifically directed to a different audience.

The “Subscriber’s Guide to the MARC Distribution Service” gives specifications for tapes in the MARC II format, including tags, indicators, delimiters, etc., for each field in the record. This manual includes and updates most of the information in *The MARC II Format*, published in January 1968. As must be expected, much of the latter publication is now out-of-date. Use of the “Subscriber’s Guide” will be essential for all programmers attempting to work with tapes from the MARC Distribution Service. Those who wish to make their machine-readable cataloging data as compatible with MARC as possible will also find use of this guide compulsory, although they will probably not use all the fields present in the MARC record.

While the presentation of the information is quite technical, it is not so much so as to prevent the non-programmer who has acquired the degree of background essential to anyone who intends to work with machine-readable cataloging from understanding it. The guide is not easy to read; it is perfectly possible, with reasonable diligence, to comprehend it.

The “Data Preparation Manual: MARC Editors” with its appendices comprises about two-thirds of the entire book. The definitions included are most useful; it is clear that MARC is going to produce a jargon of its own, related to computer and library jargon but not fully comprehensible without definition.

This manual is slightly less up-to-date than the “Subscriber’s Guide.” For instance, it still refers to one part of the record as the fixed fields; the term is now apparently “control fields.” The use of each fixed, or control, field and of each variable field is explained at length, with samples of identification blocks (tag + indicator) and of the type of information which may occur in the field.

 Provisional lists of place of publication and language codes; a list of tags, indicators, and subfield codes; and an explanation of implicit identification blocks (see below) are given in the appendices. This manual and the next one are written from the point of view of input to the record formation program, although the output results are often given when this is not immediately evident.

The “Transcription Manual” is intended for use by operators of paper tape punching equipment. It starts with the manuscript data from which they will work, and explains the input keying conventions used. This and the preceding manual are basic to their intended primary audience. They may also provide the best indication available to those charged with designing systems for production and use of their own machine-readable data as to just how much compatibility with or following of the MARC format may be economically feasible or justifiable in a given situation.

The final section of the publication, “The Computer and Magnetic Tape
Unit Usability Study," states the factors involved in definition of a unit as machine compatible or incompatible, i.e., whether or not MARC tapes can be run on the unit. It lists, for each manufacturer and computer system, representative compatible and non-compatible tape units; and then lists, by manufacturer, the 7- and 9-track compatibility for each unit. This listing should alleviate many of the compatibility problems suffered by early MARC users, in that it makes it possible to determine if the problem is a matter of the type of tape drive or lies in the programming or read-in statements.

These manuals should be highly useful to anyone concerned with manipulation of machine-readable bibliographic data. Whether MARC II is the answer to the need for a communications format or not (and it has been adopted as a USASI standard), it is certainly an important attempt at fulfilling the need; and these manuals make judgments in several major areas possible for the first time. It would have been helpful to include for users outside the Library of Congress a description of the requirements for format compatibility, if a user wishes to key some data locally but does not wish to include all of those data elements identified in MARC.

It would also be useful—and quite possible in the present plastic ring-bound format—to treat these manuals as a loose-leaf service, providing new pages as the parts are updated, as it is to be expected they will be.—Jessica L. Harris, Assistant Professor, School of Library Service, Columbia University, New York, N. Y.
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Volume 13, 1969

This year's index represents a departure from the pattern established by Esther J. Piercy for volumes 1-10 of LRTS and retained by the Managing Editor for volumes 11-12. In the interest of achieving greater depth of indexing while not lengthening the index unduly, the practice of repeating the full title of each article under every relevant subject entry has been abandoned. Modified keywords have been adopted as "topic" headings, and these are followed by direct page references. Articles are indexed under appropriate topic words, under each author, and under the title (if the title would not file next to the topic heading). Book reviews are indexed under title, author of the review, and author(s), editor(s), etc.; where appropriate, they are also indexed under topic words. "Filler" items are indexed under title only.

Corporate names are recorded as written, not in catalog entry form. "Initialisms" are filed as if spelled as a word, whether or not they are so pronounced. Cross-references have been used sparingly; multiple listing has been utilized in most cases instead of references.

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