CONTENTS


Use Studies of Library Collections. Robert N. Broadus 317

The More Practical Microfilm—Vesicular. Don M. Avedon 325

An In-Depth Collection Evaluation at the University of Manitoba Library: A Test of the Lopez Method. Thomas E. Nisonger 329

Management Information Aspects of Automated Acquisitions Systems. J. Michael Bruer 339

Cataloging Administrators' Views on Cataloging Education. Cynthia C. Ryans 343

A Computer-Produced Serials Book Catalog with Automatically Generated Indexes. Helen H. Spalding 352

Changing from Sears to LC Subject Headings. Thomas Schadlich 361

Charles Ammi Cutter: Library Systematizer—A Brief Review. Edith Scott 364

Microform Advertising. Margaret M. Byrnes 366

Coronado's Rational Classification System. Robert D. Rodriguez 369

Margaret Mann Citation, 1980: Peter R. Lewis 373

Peter R. Lewis. J. C. Downing 374

Esther J. Piercy Award, 1980: Nancy B. Olson 377

Nancy B. Olson. Frank Birmingham and Doris Pagel 378

RS Publication Award, 1980: Charles B. Osburn 381

Letters 382

For the Record (Bylaws) 386

Index 387
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Organization of Serials Work
for Manual and Automated Systems

Mitsuko Collver

In the absence of any convincing rationale or supporting evidence for alternative ways of grouping serials activities for coordination, librarians have found it hard to choose among different organizational structures for serials management. The principle of reciprocal interdependence is recommended as a theoretical basis for the grouping of serials activities. A successful application of the principle to serials management in a university library is described. An appraisal of the expected organizational impact of automation leads to the conclusion that a structure based on this principle will be equally as effective for automation as for manual operation.

As the volume, complexity, and cost of serial publications have increased geometrically in recent years, libraries have found it necessary to participate in resource sharing, to adopt better technical tools and procedures such as on-line systems, and to develop more efficient organizational structures for handling serials. In making critical management decisions in these times of rapid change, librarians have been able to turn to the journals of librarianship for ideas on many serials topics. On one topic, however, the journals have little to offer. To this day, library publications continue the traditional avoidance of the subject of serials organization that was deplored by Gable in 1935\(^1\) and by Victoria Johnson in 1973.\(^2\) There have been a few publications advocating formation of a separate serials department including cataloging,\(^3\) but the influential and widely read serials textbook Osborn’s *Serials Publications*\(^4\) has only a brief and inconclusive discussion of the subject. He mentions some of the pros and cons of different modes of organization of serials work without recommending any one way.

Meanwhile, many organizational changes have occurred as libraries have sought ways of coping with their serials problems. As a result, today there is a great diversity of practices in the organization of serials work among libraries, ranging from the traditional division of the work among acquisitions, cataloging, and public services departments

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to separate serials departments that handle all, most, or few of the major serials functions. This diversity seems to have stemmed from the fact that each library has tried to supply its own answers to its own problems in the absence of any form of consensus within the library profession. Under these circumstances, a technical services librarian faced with a serials organization problem will obtain little guidance either from other libraries or from the available literature.

This is not to say that there is a lack of advocacy for particular forms of organization. There are three reasons, however, for remaining unconvinced by arguments that one form is preferable to another: (1) the present various methods of organization adopted by libraries were often based on nonrational factors such as historical accidents, special circumstances, personnel arrangements, or architectural constraints and not on farsighted administrative planning based on a theory that can explain why one form of organization should work better than the other; (2) the existing systems have not been evaluated objectively or scientifically; (3) facing the trend toward adoption of computers in library operations including serials work, librarians are uncertain regarding the organizational structure that will be the best for the technology of the future.

In short, as Dyal remarked upon surveying serials management in forty-six Texas libraries, there appears to be no science of serials. The discovery of the tremendous range of differences led him to wonder whether any principles of serials management really exist. If they do, they are seldom discovered and rarely shared. This paper is offered as a step toward the development of the kind of science of serials that Dyal had in mind.

PRINCIPLES OF GROUPING FOR COORDINATION

The goal of serials management is to deliver as promptly as possible the serials and periodicals that the patrons of the library need. To achieve this ultimate goal, libraries carry out several activities manually or on-line: selection of titles to purchase, preorder searching, ordering, receiving and check-in, claiming missing issues, updating holdings information, precatalog searching, cataloging, recataloging, production and maintenance of the catalogs, binding, and public service of periodicals. Each operation is essential, and all are highly interdependent. Public services cannot be satisfactorily performed unless all other operations are well maintained, and no one operation can be substantially improved unless improvements are made in the others on which it is dependent. The lack or malfunctioning of any of the major operations will adversely affect the ultimate goal.

Serials management consists of supervision and coordination of the several serials-related technical service functions. Management can be effective only when these functions are grouped and organized in a way that will facilitate communication among them, and will assure that decisions affecting any one function will support the other functions. If there is to be a science of serials management, it should help us discover the most productive ways of grouping these activities.
Seeing that very little research has been done on serials management per se, we can begin by borrowing from studies of other types of organizations.

In *Organizations in Action*, James D. Thompson reviews some of the findings of research on the question of grouping for coordination and develops a set of propositions that can provide the basis for designing a system of coordination in serials or in any other field. Thompson begins with the concept of interdependence. If one activity affects another, the two are interdependent, and coordination becomes necessary to see that they affect one another in mutually beneficial rather than destructive ways. There are three kinds of interdependence, each of which has its own coordination requirements.

**Pooled** interdependence is the simplest type. It is defined as interdependence that arises by use of a common resource or facilities. For example, all departments of a library share the use of the public catalog. Coordination of the use of a common resource is relatively easy to accomplish through standardization and rules.

The second type is **sequential** interdependence, in which there is a one-way flow of operations in the manner of an assembly line. In this type, the output of one operation is the input to the next one down the line. There is relatively little reverse flow of work except perhaps to return work for correction of errors. Sequential interdependence is coordinated by plans. Each operating unit in a sequence must know what volume of work flow to expect and must maintain adequate staffing, equipment, and supplies to keep this volume flowing through on schedule.

The most complex type of interdependence, and the type that is the most costly to coordinate, is **reciprocal** interdependence. In this type, each function requires repeated inputs from and interaction with the other functions. The work process cannot be predetermined by plans but must be carried out by mutual adjustment between the workers and the object they are working on. Neither the process nor its outcome can be predicted or predetermined by rules and plans.

Figure 1 summarizes the three types of interdependence and indicates the type and costliness of coordination involved in each. The degree of necessity for grouping activities together is clearly implied by the type of interdependence. It is essential that people whose actions are reciprocally interdependent work together as a team. Those who are sequentially interdependent should be located near to one another to facilitate transmittal of the work in process, but they need not interact continually. Those who use a common resource need only to use the resource according to the rules, but they need not interact with one another.*

These considerations led Thompson to state the following basic guidelines for grouping activities. “The basic units are formed to handle reciprocal interdependence, if any. If there is none, then the

*They may, of course, get together occasionally to revise the rules. The rule-making activity itself involves the rule makers in a reciprocal relationship.
Type of Interdependence | How Coordinated | Cost of Coordination | Necessity for Grouping Together
--- | --- | --- | ---
Pooled | Standardization and Rules | Low | Low
Sequential | Plans | Medium | Medium
Reciprocal | Mutual Adjustment | High | High

Figure 1
Chart of Types of Interdependence and Coordination

basic units are shaped according to sequential interdependence, if any. If neither of the more complicated types of interdependence exists, the basic units are shaped according to common processes."

When functions in the flow of work are sequentially interdependent (the work flows from A to B but not from B to A), they may be grouped together in sequential order to form groups of convenient size for coordination. For example, in handling a monograph title in a large library, the flow of work is sequentially interdependent. The functions of preorder searching, ordering, receiving, precatalog searching, cataloging, card production, processing, circulation, etc., flow in one direction. When a book is purchased, cataloged, labeled, and sent to the stacks, that is about the end of processing the title. Since the whole work flow is sequentially interdependent, the flow easily can be divided into sections such as acquisitions, cataloging, and circulation, in order to obtain departments of optimum size for supervision.

In contrast, during the lifetime of a serial publication, which may be three months or a hundred years, these major activities are repeated. Each time the title or issuing body changes, the publisher or frequency changes, the publication is suspended, ceases, or starts again, the size or format changes, special issues appear, or subscriptions are dropped or added, the flow of the work is interrupted, or moves in all directions among various serials activities. Thus the functions involved in processing a serial title have reciprocal interdependence. Work is done by interaction, and no function can continue for long without reactions from other activities. In this type of interdependence, the cost of coordination is highest, and it receives the highest priority as a criterion for grouping activities. Thus, according to Thompson’s theory, all serials-related activities should be grouped into one unit for the benefit of maximum coordination.

In many libraries, both serials cataloging and monograph cataloging are done in the cataloging department. According to Thompson’s principles, however, serials catalogers and monograph catalogers are in a relationship of pooled interdependence, and their work can be
coordinated by standardization and rules. In this case, standardization is provided by the Anglo-American cataloging code, the shelflist, internal manuals, and memoranda. The cost of this type of coordination is low, and it should be given the lowest priority in forming work groups.

If Thompson's theory is correct and if it has been correctly understood and applied to serials operations, then a reorganization of serials in accordance with his principles of grouping activities should bring about a reduction of coordination problems and increased efficiency and effectiveness.

**Applying the Principles in a University Library**

In 1974, in response to repeated complaints about serials services, the Library of the State University of New York (SUNY) at Stony Brook undertook a serials reorganization study. At that time, serial publications were handled differently by different sections of the Acquisitions and Cataloging Departments, depending on whether they were: (1) serials, which are issued annually or less frequently than annually; (2) periodicals, which are issued more frequently than annually; or (3) monographic series, which are essentially separate works with a common series title. This manner of dividing the work had led to a division of similar operations among different sections of the Acquisitions Department and the Cataloging Department, each section being inflexibly assigned to handle only one type of publication. The results were duplication of effort and files, inconsistent, illogical treatment of publications, errors, and delays.

The detrimental effects of this structure were felt by library staff and patrons, who complained of slowness in ordering, failure to check-in promptly, delay in delivering issues to shelves and to the branch libraries, an excessive number of missing issues, failure to keep holdings cards current, and delay in the provision of bibliographic information.

After some months of study, it was decided to group serials activities together in a single department for coordination. The responsibilities of the new Serials Department include most phases of serials handling for both main and branch libraries. Two functions not included are selection of titles to order, assigned to Collection Development, and servicing of the bound volumes shelved in the stacks, which remains the responsibility of the Circulation Department. Once the current issues or volumes are delivered to the branch libraries by the Serials Department, each branch is responsible for subsequent processing, including binding.

*The Organizational Design and Rationale*

The newly created Serials Department has responsibility for three major serials activities: acquisition, cataloging, and public service. The interdependence of these three major activities is represented by the overlapping circles of Figure 2. The administration of serials work, which coordinates, controls, and balances resources of the three major
Diagram of Interdependence and Grouping of Serials Activities

activities, is located in the center of the diagram. In medium and large libraries there must be someone who is responsible on a full-time basis for making means relate administratively to the ends of serials management.

The placement of specific operations within the chart indicates the relative closeness or distance between tasks in the flow of work. While some operations are closely linked, as for example check-in and claiming, they are all interdependent. It would be misleading to draw a flowchart with a start and an end for serials operations.

"Bibliographic decision making" is placed in the center because it is the controlling activity for all the others. The importance of availability of the serials catalogers in the Serials Department cannot be overemphasized. In every project, their professional input and guidance are important elements in producing high-quality results. The essential weakness of serials handling in many libraries lies in the lack of active participation of catalogers in overall serials work. In almost every aspect of serials operations—ordering, searching, cataloging, check-in, and binding—bibliographic control plays the key role. Usually the person who possesses this knowledge is a serials cataloger. The catalogers' intimate participation and assistance are essential to maintain a high quality of serials operations.
The rationale for including the function of servicing the current issues in the periodicals reading room of the main library is that unbound and incomplete volumes are still “in process” in the technical services and it is best that they be handled by serials personnel, even though they are shelved in the public area for patrons’ use. Serials personnel deliver, shelve, and remove them daily, and check them frequently for missing, lost, and damaged issues to be claimed or purchased. Some issues are waiting for arrival of indexes to be bound with them or microforms to replace them, or waiting to be cataloged. Questions asked at the front counter in the periodicals reading room are mainly about the location and availability of bound and unbound periodicals.

The grouping of all serials-related activities and personnel together into a serials department prepares the way both for smoother technical service operations and for more effective public service. Within the new department at Stony Brook, we eliminated physical fragmentation of serials work, files, and personnel; eliminated duplicate effort, overlapping functions, and inconsistency in handling similar materials and problems; gained a flexible pool of workers, talent, and technical knowledge; and improved the communication among serials workers. On the public services side, the clear assignment of responsibility for serials made it more likely that serials problems brought in by patrons and library staff would be taken care of promptly and authoritatively. At least in this test case, the unified serials department has proved to be an effective structure for serials management.

ON TO AUTOMATION

It is not enough, however, that the serials department is founded on administrative science principles and tested in practice. One more question remains to be answered before this type of organization can be recommended for other libraries, and that question is, Will the same structure be equally as appropriate for automation as for a manual system of operation? This issue is considered in two stages, by dealing first with the long-run prospects of automation and then with the process of conversion from manual to on-line operations.

In the long run, the impact of automation on the unified serials department will be a proportionate reduction of staff in those functions that are performed by the new technology. The department may become smaller, but its primary basis for existing, which is to coordinate the reciprocal interdependence involved in management of the unique local serials collection, will remain as strong as ever.

Automation reduces the need to group serials and monograph catalogers together for coordination. With a manual system, the sharing of the shelflist, cataloging tools, card production typists, and the authority file gives a reason for serials and monograph catalogers to work together. With automation these resources are still shared but the users have access to them through terminals, which need not be grouped together physically. The same tendency of automation to lessen the need for physical sharing of files among departments applies
to the acquisitions functions of serials and monographs. Looking ahead to automation's impact on relations between serials and public services departments, we can again see a lessening of the problems of interdepartmental communication. With manual check-in of serials, reference personnel often call receivers to ask if a volume has arrived. With an on-line system, reference workers can have this information instantaneously on their own terminals.

All evidence thus points to the conclusion that the unified serials department is well adapted to automation. From the perspective of administrative science, automation deals with pooled interdependence, achieving efficiency and coordination by grouping shared and standardized functions and facilities together in regional and national centers. It does not manage the reciprocal type of interdependence on which the unified serials department is based. With a manual system, the formation of a separate serials department breaks up some groupings that had been based on pooled interdependence, such as the grouping of serials catalogers with monograph catalogers. Automation decreases the value of such pooled groupings within the library by transferring coordination functions to the central on-line system. Thus automation weakens the argument for other structures and throws the advantage to the unified serials department.

Complete automation is still a long way off. In the foreseeable future most libraries will need to cope with partial automation and gradual conversion from manual to on-line systems. The unified serials department has proven highly adaptable in this transitional period, which actually demands more personnel and more work-force flexibility and coordination than either the old manual system or the future automated system. It is a period in which personnel are needed to maintain the established manual system, to carry out projects of conversion to on-line systems, and to operate the new systems once they have been set up.

The Stony Brook Library is a member of the SUNY/OCLC network. About the time the basic serials reorganization was completed, on-line serials searching in the OCLC data base and cataloging and catalog card production for serials became available. These new tools were phased in very smoothly in the new department. Currently a retrospective conversion of serials bibliographic records is under way, while the daily on-line activities in searching and cataloging are being carried on. The library also has begun preparations to adopt the OCLC serials control subsystem and union list of serials. Adoption of on-line serials check-in is being delayed until claiming becomes available and is proven to be dependable.

Conversion requires coordination, setting priorities, and communication between serials cataloging and check-in functions. Within a single department, this coordination can be accomplished smoothly with understanding of the necessity of each action, and without writing memos or calling meetings among sections of different departments. When all serials functions are in one department, the department has the ability to change and control all the factors involved in
conversion, and the adoption of the new tool is accomplished with a minimum of friction and delay.

**Automation and Organization**

The discussion up to this point should not be taken to imply that automation will have no impact on the internal structure of libraries. On the contrary, automation can be expected to exert an influence toward the creation of separate serials departments where they do not already exist. Also, it is interesting to speculate that automation may favor the parallel formation of a single monographs department. In the automated technical services division of the future there may be two departments, divided according to the flow of work and the degree of interdependence of tasks. In manual processing of monographs there is a division of labor between preorder searching, precataloging searching, and cataloging. With automation these three functions can be handled by the same person at the terminal. When a large number of personnel are involved, it is still advisable to keep acquisitions and cataloging separate, but if automation reduces the personnel requirements by as much as half, the two monograph departments may be united into one department of optimum size for administration.

From the foregoing, it appears that automation only reinforces the advantages of the separate serials department. The plans of a particular library need not stand in the way of the creation of a serials department according to the principles discussed in this paper, regardless of whether the library is to remain totally in a manual system, has contemplated the conversion to an automated system, or has been fully or partially automated.

**Conclusions**

By applying Thompson's theory of grouping for coordination to the organization of serials handling, it is apparent that serials functions should be grouped together for coordination, since they are reciprocally interdependent. The organizational and procedural changes based on this principle at the SUNY Stony Brook Library have resulted in many improvements in both manual and automated handling of serials work.

The typical problems of serials management, abundantly discussed in the library literature, cannot be solved simply by adopting the OCLC system or any other system. Before the new technology can be useful, the library must have accurate data in well-organized manual files. Otherwise, automation will only multiply errors and transmit them throughout the land. The procedural changes that have been described proved to be necessary steps in preparation for automation of serials, and the centralized serials department has been readily adaptable to the conversion process.

Will the centralization of serials functions work as well in other libraries? Obviously, one successful experience is no assurance that similar efforts will succeed in all cases. The rationale for the reorga-
nization assumes other things equal, and other things are not always equal. Besides the basic condition of grouping operations rationally, there are other conditions to be met, such as: (1) strong leadership by responsible management; (2) support, cooperation, and understanding of the library administration and colleagues; and (3) good staff support.

Where these other requirements can be met, a strong case can be made for reorganization along the lines that have been described here. The centralized organization of serials work will mobilize the flexible pool of workers and talent that is needed both to improve manual operations and to accomplish the conversion to automation. Legible, accurate, and updated contents of various serials files and versatile and disciplined personnel in a well-organized serials department are the basic prerequisites for the productive automation of serials. These factors are best obtained in a department that places its top priority on achievement of the goals of serials management.

REFERENCES

8. Thompson, Organizations in Action, p.59.
Use Studies of Library Collections

Robert N. Broadus

The most important general conclusions reached so far through use studies of library materials are judged to be: (1) recorded use in many libraries is low; (2) use within the library parallels circulation; (3) past use predicts future use; (4) recent materials are used more frequently; and (5) Americans use few foreign-language materials. Problems of measurement and interpretation are discussed.

I define use studies as those that start with a group of library materials, then try to determine what use, or how much use, they receive. A user study, on the other hand, begins with people and asks whether, or how much, they use library materials, and perhaps what kinds of resources. Thus the so-called Pitt study, starting with the works acquired by a university library in 1969, is a use study. The 1975 Gallup Poll on the “Role of Libraries in America” is a user study. For an example of a combination there is the American Psychological Association’s inquiry: What practitioners read Psychological Bulletin?

Library Literature has one heading for “Use and User Studies,” but in Library & Information Science Abstracts there is a division. Class E/H includes user studies while class J is for use studies, but the categories are not discrete. Furthermore, in class K/M, “Library Stock and Materials,” use studies are found frequently.

In any event, this distinction is made only for the sake of analysis and discussion. Faced with making decisions in a library, one need not probe inner consciousness to ask: “Am I acting on the basis of use, or user, or some other sort of research?”

My method will be simply to tell you the conclusions from use studies that I consider the most fundamental and then to mention briefly a few difficulties with this approach. I have narrowed the survey to five points, though others plainly are important also. Obviously, there will not be uniform opinion on what these five are nor even agreement on whether they have been substantiated. I shall state them in rather general terms.

1. Use studies have pointed up the fact that in many libraries, especially large academic and research libraries, there are miles of books that are not borrowed for years and years.

Robert N. Broadus is a professor at the School of Library Science, University of North Carolina at Chapel Hill. Edited version of paper presented at “Use and the User,” a program meeting sponsored by the Collection Development Committee and other units of the Resources Section on June 26, 1979.
The highly controversial study at Pittsburgh claims that in the Hillman Library, only 51.6 percent of the monographs circulated at all during an entire seven-year period. Nearly half did not have one recorded use. When this news broke, there was a good deal of gasping and astonishment plus no little dismay, but all of us who had sneaked through subterranean stacks, snatching at the chains of naked light bulbs, already had a fair impression: many of these books have been handled only on the annual visit of the cleaning person.

And there was previous documentary evidence as well. For one, in 1958 and 1959, Nothisen studied use of serials over twelve months in the John Crerar Library. The library, then in downtown Chicago, had absolutely closed stacks: therefore all use was recorded in the circulation files. Of the ten thousand serial titles owned by the library, some six thousand (60 percent of the runs) did not circulate during the twelve months. About 40 percent, or 3,988 titles, were used, but 2,582 of these were borrowed only one to five times each. All this occurred in a library serving high-level research people.

In the pioneering study by Fussler and Simon, University of Chicago Libraries, 1961, it was found that of a sample of monograph titles accessioned by the library in 1944–53, more than half had not been withdrawn during the following five-year period. These books were comparatively new acquisitions—not the ancient curious volumes of forgotten lore.

What of smaller academic institutions? Ettelt found that of the titles accessioned by his library in 1969, 71 percent did not circulate in a fifteen-month period in 1977–78. Of those acquired a year later, 83 percent were not checked out. The use of more recent works was a little better. Hostrop says that of the fourteen thousand holdings at College of the Desert, "79.2 per cent of the collection never left the library" in a thirteen-month period. (Even his theft rate must have been low!) Thus, while junior colleges do not have the great percentages of disused and unused books that university libraries have, the evidence is rather striking nevertheless.

Public libraries have much greater per-title use, but there have been few detailed studies of them. A major factor is the public librarians' greater propensity for discarding.

Another view of the little-recorded-use phenomenon is the 80/20 rule publicized by Trueswell: Eighty percent of circulation comes from 20 percent of the collection, with variations such as 90/50 and so on. (One turned out to be 80/42.41.)

The Bradford or Zipf distribution is an aspect of the same basic pattern. If one chooses a topic and lists the journal articles that pertain to it, a few periodical titles each will have a huge number of articles; many runs each will have few or no articles. For each subject field, a small number of periodicals is cited over and over; many are cited only infrequently.

One impact of all these studies has been to reinforce the judg-
ment that no library should try to be complete for any community of users. If it is, it apparently will have to collect and store thousands or millions of items that will be used once a decade or even less frequently. So far, there seems no escape from that fact.

Applications, however, are not always easy to make. For instance, the Pittsburgh study tabulated 1974 circulation according to number of times each item was borrowed. The distribution follows the Bradford-Ziph law in that a few items circulated heavily, twenty or more times each, while many items were borrowed only one or two times each. But note the dilemma: Of 217,119 transactions (circulations) during the year, 63,526 involved items that circulated only one time each. Did the librarians make wise decisions when they acquired these low-use books? If these titles had been rejected, then circulation as a whole might have been reduced by 29 percent, or on 63,526 occasions the reader would have obtained a book of lower priority than originally desired.

In addition to recorded circulation, there is also the question of consultation in the building, an important kind of use to be discussed below. But, all told, these studies have pointed up more sharply an old problem for research libraries particularly: little use—especially little recorded use—of so many library resources.

2. The next generalization I think of significance is that use of materials in the building seems to be parallel and proportional to circulation. Fussler and Simon chose a sample of stack books and placed in each a questionnaire that would be revealed only when the book was opened. In half of these books they also concealed a pen that the user could take as a token payment for completing the questionnaire. The results: “Books that develop little recorded use (circulation) develop little browsing, and books that develop much recorded use develop much browsing, except for the highest use books.”

McGrath, at the University of Southwestern Louisiana University Library, counted books left on desks and tables and analyzed them according to thirty-eight subjects. The subjects that showed heavy use by this measure were those which accounted for more circulation (as a rule), and vice versa; for instance, in economics 59 were used in the library, 169 checked out; more books in the field of English were used, with 665 used inside and more than 2,000 checked out. In England, Harris, at Newcastle-upon-Tyne Polytechnic, and Hindle and Buckland, at the University of Lancaster, found similar relationships, as did the Pitt study in this country.

Note, however, that though use within the library seems proportional to recorded circulation, we do not know much about the ratio. McGrath (counting only books left on desks and tables) found inside uses to be lower than circulation. Fussler and Simon (counting items removed from shelves) said, “There is consider-
ably more browsing (as measured by the number of touches) than recorded use . . . maybe 3 to 9 times as much.” The difference probably is accounted for by the ways of measurement. Some people do pull books off the shelves, examine them, then reshelve them, and don’t leave them strewn around. Harris, at Newcastle, placed a slip of paper in each of a sample of books, so that it would be disturbed only if the book were handled, then went back later to count the slips missing or changed. He concluded that “the number of books receiving any consultation at all is 20 times as high as the number being used at desks and not being re-shelved.” For every book left on a table, nineteen were at least touched and then put back. In this case, the ratio varied remarkably by subject. Nurses tended to set things back on the shelf. (Fortunately, he didn’t check library science students.)

In short, it is difficult to measure the amount of use in library buildings, though we are fairly sure that it mirrors in some respects (e.g., by class of books) the recorded circulation.

3. Studies of use have pretty well demonstrated for most libraries that the best way to predict the titles that are going to be called for next year is to note the ones used in the immediate past. This fact is of great practical value in deciding what to discard or send to storage.

Again, the Fussler-Simon work, which investigated several criteria such as language and age of materials, found earlier use to be the most significant in determining later use. Truewell, in a study of three libraries—at Northwestern University, the University of Massachusetts, and Mt. Holyoke College—found very nearly identical data for each: About 93 percent of the books that circulated had been checked out during the previous five years. To look at a study of a small public library in Iowa, Eggers noted that 93 percent of all returned books had circulated in the previous one year. Slote’s dissertation on adult fiction in five public libraries reached the same general conclusion.

Something of the same pattern has been observed by way of citation counts. Line, for instance, found that those articles in Physical Review that had been cited heavily immediately after their publication were cited frequently during the next twelve years. If a paper was not referred to very much right after publication, it had less chance of being cited often in later years.

Sociologist Robert Merton has termed such phenomena examples of the “Matthew Principle,” referring to the words of Jesus Christ in the Gospel according to Matthew: “For unto everyone that hath shall be given, and he shall have abundance.” In other words, it is easier for a millionaire to get an extra ten thousand dollars than for a pauper to do so. Derek de Solla Price uses the expression “cumulative advantage distribution.” (Jesus might have put it that way had he been at Yale.) A paper (A) is cited by another author. Those who read the latter then are more likely to look up paper A because of the citation, and in turn to make reference to it in their own writings. Then new readers are led to
paper A. It has been shown by many studies that people seek particular books or articles in the library because of bibliographic citations to them. This is one reason why citation counts show a Bradford distribution—a few works receiving many citations, many works receiving few.

Some studies do indicate that for high-use materials the percentage of decline in use is greater. For instance, Fussler and Simon found that some books not used at all in one three-year period received an average of 0.102 uses each during the next three years. But these titles had nowhere to go but up. Still, the heavily used books in one period tended to be used more in succeeding years than did other books.

All this adds up to the conclusion that, of the present books and articles in the library, the ones most likely to be in demand in the future are the ones used in the immediate past. When someone at Harvard goes into the library and consults a book, the odds are increased (very slightly, of course) that the same title will be asked for across the country in Berkeley.

4. A further finding, perhaps on the surface contradictory to the previous one, is that recent materials receive the most use. This fact is emphasized over and over in citation studies, especially in the experimental sciences and to a large extent in the social sciences. Even in the humanities, whereas the source materials that writers make reference to are old (for instance, the works of Shakespeare), the critical works cited tend to be recent—at least Miller so concluded after a brief analysis of citations in American Literature.

Morse, studying a sample of books at the MIT libraries, said, “On the average, book circulation diminishes as the book ages, rapidly at first then levelling off.” Again the Pitt study agrees. Fussler and Simon pointed out that for all books, the “average use ... appears to be in a continuous decline,” but books more than a hundred years old circulated about as much per title as those aged seventy to one hundred.

Perhaps, however, the point should be stated in reverse: Older materials seem to be used more than some people think. Patterns of “decay” or “obsolescence” are not linear or regular. Therefore, to bury books merely because they are old and seem to be dead, or even to refuse to buy such books, is not warranted by the facts.

The most thorough analysis of the literature relating to obsolescence was done by Line and Sandison for Journal of Documentation in 1974. They point out the difficulty of interpreting such studies. Though citation counts and surveys of use in libraries do imply that aged materials are no longer used much, it should be remembered that older works do not exist in great quantities, or libraries do not make them available. If a library has a shelf-mile of materials published in 1978 and forty shelf-feet of materials published in 1918, then it is no wonder that last year’s works received more citations and more use than works
published sixty years ago. The American Historical Review had 856 pages in 1903; it carried 1,452 pages in 1978—one reason why the 1978 volume will receive the more citations.

In this sense, points three and four are in some harmony. Use is a predictor of use, though that use does generally decline over the years.

5. Another notable finding of use studies is that Americans on the whole, even scholars (with the exception of certain fields), do not utilize a great quantity of foreign-language materials.

In the social sciences 90 to 99 percent of the materials cited by U.S. writers are in the English language. The sciences generally run higher in use of foreign-languages resources. The humanities vary sharply from field to field, with art historians favoring European languages, and people in American literature obviously favoring English.

Even then, there is good reason to think that citation counts overrate the use of foreign-language materials, as compared with circulation from libraries. Most citation studies are based on the writings of scholars or research people—a level “higher,” more “serious” than that of the average user of a university library. Heussman studied references made in English-language theological journals and compared the results with circulation in two seminary libraries. Of the citations, 52.6 percent were in English, but circulation from the libraries was 95.5 percent English. Few foreign-language materials were borrowed by seminarians and faculty; many such languages were cited in journals. Other studies indicate the same discrepancy.

In England, Wood and Bower analyzed the social science materials requested of the National Lending Library (as it was known then): 98.4 percent* were for items in English.27 I once had a student check a small university library where 10 percent of the holdings were in foreign languages. Of items in circulation, only 1 percent were in foreign languages. Another student in a different university found that 39 percent of the holdings were in foreign languages, but circulation was only 11 percent. In each case, the foreign-language works in the library were greatly underrepresented in circulation. The relatively little apparent use received by foreign-language materials may be regrettable, but it seems pretty well demonstrated in the U.S.A. and the United Kingdom.

Other conclusions reached by use studies could, of course, be mentioned (there have been so many such efforts in recent years), and lists of important periodical titles could be presented, but these five points seem to me at the moment the most significant.

I don’t know whether to emphasize the value of use studies, or to stress their limitations and difficulties. Some expect too little from them, some too much. We do need better predictions of what people

*Percentage calculated by this author.
need and are likely to request. Our large academic libraries have quantities of books that apparently are seldom consulted; yet satisfaction rates hover around the 50 percent mark. Somehow, books they want are not there; the ones they find are not the ones they want. (That is really a little too severe, of course.) But almost any studies that help us improve are worthwhile.

And yet, most use studies so far are rather blunt. Our measurements are not precise enough. When a book is checked out, what does that really say about use? Can you find out by asking people? (I once had a student claim that he should be allowed to renew a book with a hold on it because he had not had time to read the thing on the first borrowing.) One book may be studied for twenty hours, another for ten minutes. Meier (at Michigan) found that a book might be taken from reserve and passed along to as many as six people on the basis of the item recorded charge.28

Meier suggested a more precise measure of use, the "item-use-day." If I look at a slide for two minutes this afternoon, that is one item-use-day. If I spent two hours this morning and one this afternoon reading a detective story, that is one item-use-day. If I made a valuable discovery by consulting a treatise on physiology (the least likely of the three), still only one item-use-day is counted. Meier's measure, therefore, is rather gross, but is more precise than most of the others.

Unrecorded use is even more difficult to measure. We may observe people carefully in the library, but that is expensive. Even then, if a patron is alternately gazing at a library book and whispering to a fellow sufferer, to what extent is the book being used? Can we depend on counts of books left on tables? How many volumes are consulted and then reshelved in spite of library signs to the contrary? Open stacks affect the amount of use in the building. What of other aspects of the situation? If I locate a book close to an empty shelf in the stacks, so that I can check a few pages without going to a carrel, I'll consult the book, then set it back in the vacant notch, so that it isn't left on a table to be counted. Lighting is a factor. In other words, many different conditions help to determine the amount of use in the building, thus making such use hard to measure.

More fundamental, these studies try to determine what has been used, not what should have been used. For instance, with respect to foreign-language materials: A librarian may decide that because a certain German work is more accurate than its English-language counterpart, that title should be obtained in spite of its predicted low use. Furthermore, people consult only the resources to which they have access. However valuable the treatise, if the patron doesn't know about it or can't reach it, that person doesn't use it. Use studies will always face this limitation.

To base future decisions on past use represents also a heavy measure of conservatism. It fails to provide new and different resources to meet fresh interests.

But these difficulties are present in almost every attempt to measure things of presumed value to human beings—from toothpaste to inter-
state highways. In spite of these difficulties, use studies are valuable. We have learned a good deal from them. The more evidence we can gather, the better we'll be able to build and manage collections that meet the needs of our users.

REFERENCES

There is a trend toward the use of nonsilver microfilm. Vesicular film, being one of these nonsilver films, has a lot going for it in terms of convenience, cost, and durability. This article explains, on a nontechnical basis, how vesicular film works, describes its components and image properties, and tells how it can be used. Libraries can save money by using vesicular microfilm, and at the same time have a more efficient medium.

Although inflation and materials shortages are causing almost all prices to rise, the rate of increase is not equal for all products. Some new materials may have better properties at lower costs than the traditional products and materials with which we are familiar. Therefore, we must continuously learn about new items and compare the characteristics against the cost. One new product of interest to microfilm users is vesicular film, which, in the opinion of this author, has many better characteristics than silver-gelatin film, costs less, and, for most applications in libraries, is more useful.

Vesicular film is sometimes called thermal film because it is developed by heat. These films are composed of a tough, plastic, sensitive layer coated on a base of high-strength, photographic-grade, dimensionally stable polyester. Vesicular photographic materials are based upon the phenomenon of light scattering rather than upon that of light absorption, as are silver-gelatin materials. Vesicular images are simply produced, without chemicals and in a normally lit room.

Image Formation

In a duplicating application, the film is exposed to ultraviolet light, which is directed through a master film held in direct contact with the vesicular duplicating film. Only clear areas on the master film allow the ultraviolet light to pass through to the vesicular duplicating film and result in opaque areas in the duplicate. Opaque areas in the master, on the other hand, will give clear areas in the duplicate. The film is developed by being subjected to heat for a moment. The film is fixed by a second exposure to ultraviolet light. (See figure 1.)
Vesicular film is generally a sign-reversal process. A negative master (clear lines on a dark background) produces a positive duplicate (dark lines on a clear background); a positive master produces a negative duplicate.

**BASE MATERIAL AND SENSITIVE LAYER**

The base material used for vesicular film is always polyester. It is used because of its resistance to tearing, breaking, heating, and curling. In particular, it is dimensionally stable under different environmental conditions. The photosensitive coating is a plastic layer containing diazonium salts, which are sensitive to ultraviolet light and are used to produce the image. A dye is added to the coating to improve the appearance of the final product. A subbing is used to improve the adhesion of the sensitive coating to the base. (See figure 2.)
Because of the type of base material and sensitive coating used in vesicular film, it is much more durable and resistant to scratching than silver-gelatin film, even when it is on a polyester base. Diazo films are also more resistant to scratching than silver-gelatin films.

**IMAGE PROPERTIES**

Vesicular films can resolve upwards of 400 line pairs per millimeter; this capability is excellent for microimages. The vesicular image is very sharp and allows high-quality duplicates to be made on it. Vesicular film has a slower speed than silver film and cannot be used as a camera film. However, it has ample speed as a duplicating film and, as a matter of fact, is faster than diazo film. The contrast of vesicular film, although measured differently from that of other films, is compatible with the human eye and the reader screen image. Vesicular films are produced in different colors, which have no effect on the image photographic properties, i.e., the image on the reader always appears in black and white, even though the film itself looks gray, blue, or light beige.

**REPRINT CHARACTERISTICS**

Vesicular film can produce good to excellent hard copies in most reader-printers. Although it can be used as a master for generating additional duplicate microimages, the quality will only be fair.

**STORAGE**

Vesicular film is very durable and resistant to water solutions of many acids, bases, salts, and detergents, as well as to many solvents and gases. The nature of the film permits easy removal of fingerprints, oils, and grease. The sensitive layer is not moisture absorbing and will not become brittle. Since the film has no residual silver, hypo compounds, or other processing chemicals, these cannot cause fading, discoloration, or stain during storage. There are no gelatin layers involved to support bacteria or fungus growths. As with any photographic material, there are recommended storage procedures for vesicular film that provide optimum results, as follows:

**Boxes.** It is recommended that processed vesicular film be stored in bleached-board boxes coated inside and out with polyethylene (milk carton stock is readily available from most box manufacturers). Polystyrene coatings are acceptable, though somewhat less readily available.

**Reels, Cartridges, and Cassettes.** These devices, on which processed vesicular film has been supplied, are made of plastic materials specifically selected and recommended as optimum for storage and long-term use. When placing vesicular film back into storage, be sure that it is on the same reel, cartridge, or cassette that was originally supplied. Containers may contain acids or other chemicals that may be harmful to the film.

**Filing Enclosures (Cabinets and Storage Devices).** It is recommended that reels, cartridges, cassettes, and microfiche be stored in plastic file
units. Wood and steel units may also be used. Steel units should be coated with lacquer, enamel, or other corrosion-resistant finish. Some vesicular films may have a chemical reaction with bare metal.

*Temperature.* Short-term storage temperature should not exceed ninety degrees Fahrenheit (thirty-two degrees Celsius). Storage temperature for extended periods of time should not exceed seventy-five degrees Fahrenheit (twenty-three degrees Celsius). There is no lower limit on temperature; however, vesicular film is quite sensitive to heat (temperatures above one hundred degrees Fahrenheit).

*Humidity.* Neither high nor low humidity has an adverse effect on vesicular film.

*Cleanliness.* Although vesicular film is highly scratch-resistant, dirt can scratch any microimage. Storage of all microforms should be air conditioned, if possible, and otherwise cleaned regularly and thoroughly.

*Light.* Because processed vesicular film is highly stable, it may be used in any normal working environment.

**HANDLING PROCESSED FILM**

Properly handled vesicular film will resist scratching and tearing. Frequent use in readers or other machines will not damage the film.

If dust or fingerprints have accumulated on the film, the quickest and easiest way to clean both sides at once is to put the film on the rewinder and hold a clean, lint-free cloth dipped in solvent to it while rewinding. Any commercial film cleaner may be used. Be sure to read and follow the safety precautions on the label of whatever cleaner you use. Vesicular film can be washed with soap and water if necessary (not exceeding one hundred degrees Fahrenheit), but must, of course, be thoroughly rinsed and dried after washing.

It is recommended that vesicular film not be interfiled with other types of film because of a possible chemical reaction.

If these precautions for storing and handling vesicular film are observed, periodic inspection is not necessary.

**CONCLUSION**

If your library is paying more money for silver-gelatin microfilm than the same publications would cost on vesicular film, you probably should reconsider your position. If you are already using vesicular film, perhaps this article has made you more aware of the necessary storage and handling requirements.
An In-Depth Collection Evaluation at the University of Manitoba Library: A Test of the Lopez Method

Thomas E. Nisonger

A collection-evaluation technique that offers a quick and efficient means for obtaining an empirical evaluation of the depth of the collection in specific subject areas has been tried on an experimental basis at the University of Manitoba library system. The technique was tested twice in each of four different subject areas. Although inconsistencies in the results raise questions about the reliability of the technique, further analysis indicates that it does constitute a valid tool for evaluating the depth of the collection.

Many methods have been devised for evaluating the collections of academic and research libraries, of which these five are especially noteworthy: comparing the library's holdings with those of the Library of Congress;\(^1\) analyzing circulation records;\(^2\) checking the holdings against specialized subject bibliographies and bibliographies in scholarly monographs;\(^3\) counting the number of books in the appropriate LC classes that support each of the academic courses;\(^4\) and applying the Clapp-Jordan formula to determine if a library contains a sufficient number of volumes to support the institution's academic program.\(^5\) Excellent discussions of the various approaches to collection evaluation can be found in articles by Bonn\(^6\) and Mosher.\(^7\)

Whether they use checklists, formulae, volume counts, or some other approach, almost all the collection-evaluation techniques require considerable labor. Although the Clapp-Jordan formula can be applied without much effort, it does not directly address the question of whether the library is adequate in a specific subject area. Over the past several years the Bibliography Unit at the University of Manitoba Elizabeth Dafoe Library has used a variety of collection-evaluation techniques, but none has proven to be 100 percent satisfactory.

A technique proposed by Manuel D. Lopez several years ago in Library Resources & Technical Services appeared to meet our requirements for a quick and efficient method of obtaining an objective evaluation of a particular subject area.\(^8\) Moreover, the technique seemed to be especially suitable for measuring the depth of the collection for re-
search purposes. Lopez' article offered a description of the technique but no account of its implementation. During the 1977-78 academic year the bibliographers at the Dafoe Library used the method on an experimental basis (rather than as part of a formal evaluation study) to test its reliability, i.e., consistency in results, and its validity, i.e., whether it actually measures the depth of the collection.

The primary objective of this article is to examine the statistical results and to discuss the problems in interpreting the results and their implications for the use of the technique as a collection-evaluation tool.

**Evaluation Method**

Lopez describes his technique in two brief paragraphs.

Select at random from a critical bibliography, a number of references. Check these references against the library's holdings. If those references are available, then take, as your second reference, the first citation in that publication's bibliography, the first chapter'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 cumulative expenditure of effort on the part of the patron and would be more difficult to obtain due to the publication date.9

To implement this procedure in the experiment at the Dafoe Library, each of the four bibliographers selected a critical bibliography in a discrete subject area, namely, medieval French literature, family therapy, the American novel, and modern British history.10 A random sample of twenty-five references was selected from each bibliography. To provide a basis of comparison that would test the reliability of the method, each bibliographer selected a second random sample of twenty-five references from the same bibliography. Although Lopez exemplifies the calculations with a sample of ten citations at level one, our bibliographers chose to begin with twenty-five because we believed that a larger sample would test the method more adequately. We also followed his recommendation that the citations be staggered to avoid a concentration of references limited to a few authors.

A number of unexpected obstacles were encountered during the exercise. Sometimes it was impossible to continue the search at the next level because the work in hand had no references, bibliography, or footnotes, as is often the case with primary source material, such as novels, newspapers, parliamentary documents, etc. In other instances, incomplete or unclear references, commonly found in older works written before footnoting procedures became standardized, made it
necessary to discontinue the search. It was decided to make an adjustment in the scoring method to take these situations into account. However, no accommodation in the scoring was made for works listed in the public catalog that could not be found on the shelves or elsewhere. Because they would not be available to a library patron, such works were treated as if they had never been in the collection at all and were counted in the category of unsuccessful searches. The question of differing editions was an especially vexing problem. We decided to count as a successful search an edition later than the one cited but not an earlier one, on the theory that a revised or enlarged later edition would be more likely to contain the specific information needed by the library patron. The validity of this decision is admittedly questionable, but some mechanism was required to cope with this particular situation. Because Lopez’ article does not provide any guidance concerning these problems, it became necessary to improvise strategies to resolve them.

When the checking was completed, it became evident that one could use several different statistical measurements to evaluate the results. In addition to calculating the raw score as described by Lopez, one can calculate the score as a percentage of the maximum possible points, namely, 3,750 for a sample of twenty-five references. It was decided to adjust the percentage score by eliminating all cases that could not be searched at a higher level because the works lacked bibliographical references. The adjusted percentage is derived by subtracting from 3,750 the number of points that might have been obtained had one been able to complete the search through the fourth level and dividing the raw score by the remainder. For example, let us suppose there were no citations in a book found at level three. This would, of course, mean that it was impossible to search at level four, so eighty points were subtracted from the maximum total—3,750. The raw score is then divided by this figure—3,670—to obtain the adjusted percentage. This figure is probably the most significant statistical measurement (at least for our purposes) because it provides the most meaningful basis of comparison between the first and second times the exercise was carried out as well as among the four subject areas.

PROBLEMS WITH THE RESULTS

After the statistical results were calculated, two major problems became apparent. First, there were significant discrepancies in the individual scores between the first and second samples. Second, the relative ranking of the composite results for the four subject areas did not correspond to the anticipated rankings expected from the University of Manitoba book selection policy.

Table 1 summarizes the statistical results of the two surveys and reveals large discrepancies in three of the four subject areas, even though the composite variations fall within reasonable limits. Only in the area of family therapy did the results remain consistent, while medieval French literature and modern British history showed a wide range.
TABLE 1
RESULTS FROM TWO SAMPLES SELECTED BY THE LOPEZ METHOD TO EVALUATE THE UNIVERSITY OF MANITOBA LIBRARY COLLECTIONS

<table>
<thead>
<tr>
<th>Subject Field</th>
<th>Scores</th>
<th>Percentage Difference</th>
<th>Adjusted Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>American Novel</td>
<td>1,130†</td>
<td>930*</td>
<td>17.7</td>
</tr>
<tr>
<td>Family Therapy</td>
<td>1,930*</td>
<td>1,870†</td>
<td>3.1</td>
</tr>
<tr>
<td>Medieval French</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature</td>
<td>1,010*</td>
<td>570†</td>
<td>43.6</td>
</tr>
<tr>
<td>Modern British</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>1,140†</td>
<td>700*</td>
<td>38.6</td>
</tr>
<tr>
<td>Composite</td>
<td>4,710†</td>
<td>4,570*</td>
<td>3.0</td>
</tr>
</tbody>
</table>

*Results from sample I.
†Results from sample II.

Needless to say, these inconsistencies in the results are of an unacceptable magnitude and cast extremely serious doubts on the reliability of the method. One suspects, however, that a major explanation for these inconsistencies lies in the geometric progression of the scoring system, which assigns a successful search at level four eight times the value of a successful search at level one. In accordance with this reasoning, the high value assigned to the fourth level would skew the overall results. Thus, the luck of finding or not finding one or two references at the higher levels would cause a large variation in the final score.

In order to test this supposition, it is necessary to analyze our data using different permutations of the scheme originally proposed by Lopez. One can make three different types of adjustments while still maintaining Lopez' basic system. It is possible to alter: (1) the number of references; (2) the number of levels one searches through; and (3) the scoring system. One can also experiment with various combinations of the above categories. Thus, the total number of possibilities is enormous.

Table 2 summarizes the comparison of results between samples I and II when three different permutations of Lopez' scheme are applied to the data gathered at the University of Manitoba. Following the format of table 1, the high score, low score, and percentage difference in the raw score plus the high and low adjusted percentages are presented for each subject area. Column A displays the pertinent data when a 4-3-2-1 scoring system rather than Lopez' 80-40-20-10 scheme is applied to the data we collected. Column B reveals the results of applying a 40-20-10 scoring system to the first three levels of searching. In effect, this is Lopez' system except that the fourth level has been eliminated from consideration. Finally, column C illustrates the results of applying a 3-2-1 scoring system to the first three levels of searching.

A careful inspection of table 2 indicates that for most subject areas large percentage variations still exist under all three permutations of
<table>
<thead>
<tr>
<th></th>
<th>Permutation A—4-3-2-1 Scoring System for 4 Levels</th>
<th>Permutation B—40-20-10 Scoring System for 3 Levels</th>
<th>Permutation C—3-2-1 Scoring System for 3 Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>Percentage Difference</td>
</tr>
<tr>
<td>American Novel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Points</td>
<td>97†</td>
<td>82*</td>
<td>15.5</td>
</tr>
<tr>
<td>Adjusted percentage</td>
<td>53.9</td>
<td>40.6</td>
<td></td>
</tr>
<tr>
<td>Family Therapy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Points</td>
<td>135*</td>
<td>134†</td>
<td>0.7</td>
</tr>
<tr>
<td>Adjusted percentage</td>
<td>61.2</td>
<td>55.8</td>
<td></td>
</tr>
<tr>
<td>Medieval French Literature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Points</td>
<td>81*</td>
<td>45†</td>
<td>44.4</td>
</tr>
<tr>
<td>Adjusted percentage</td>
<td>33.3</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Modern British History</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Points</td>
<td>87†</td>
<td>64*</td>
<td>26.4</td>
</tr>
<tr>
<td>Adjusted percentage</td>
<td>34.8</td>
<td>28.8</td>
<td></td>
</tr>
<tr>
<td>Composite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Points</td>
<td>363†</td>
<td>362*</td>
<td>0.3</td>
</tr>
<tr>
<td>Adjusted percentage</td>
<td>41.5</td>
<td>39.8</td>
<td></td>
</tr>
</tbody>
</table>

*Results from sample I.
†Results from sample II.
Lopez' system. Several observations are in order. Generally, the level of variation between the two tests decreases under all three permutations. This is true in every case for the American novel and modern British history and in most instances for family therapy. The variation tended to increase under the modifications of Lopez' plan only for medieval French literature. This pattern suggests that Lopez' method of assigning values to the four levels is partially responsible for the large variations initially encountered, but that other undetermined factors must also be at work.

Unfortunately, the inconsistencies in the results under the three permutations are still of such a magnitude that it would be difficult or impossible to use any of them with confidence as a collection-evaluation tool. Moreover, it should be borne in mind that tests I and II were both based on the same bibliography for each subject area. The variations between the two tests could have been even greater if different bibliographies had been utilized. If there had been uniformly small variations for each subject area (ideally less than 5 percent, or at most 10 percent) under any of the three permutations, one would hope that that particular formula constituted a viable evaluation tool and further experimentation would have been in order. More reliable results could almost certainly be obtained by selecting a larger number of citations at level one, perhaps 50 or 100, or even a greater number. However, one of the most appealing features of this technique is that it can be carried out relatively quickly and without expending a great deal of effort. To increase the number of initial references would nullify this benefit.

Table 3 illustrates the rank ordering of the four subject areas based on their composite adjusted percentages for the two tests, along with the collecting level of the subject as stated in the University of Manitoba library system's book selection policy. The rankings are presented for Lopez' original scheme as well as for the three previously discussed permutations.*

The results did not turn out exactly as anticipated, although there was a substantial degree of correlation between the relative rankings and the collecting levels. The area that ranked highest under three of the four systems—family therapy—is collected only to the master's degree level. It ranked higher than modern British history (collected at the Ph.D. level) under all four schemes and higher than the American novel (also collected at the Ph.D. level) in all cases but one. Theoretically, if there were to be perfect correlation between the rankings and the collecting levels, the subjects collected at the Ph.D. level—the American novel and modern British history—should rank in the two higher positions (one and two), while the two M.A.-level subjects—

*The composite adjusted percentages were used as the basis for the rank ordering presented in table 3 because this appears to be the most valid measurement for comparative purposes. Had the raw scores been used instead or had the rankings been presented for the individual tests, the rank ordering would have been essentially the same as in table 3, although not identical. In no instance was there a perfect correlation between the rankings and the book selection policy.
### TABLE 3
**RANK ORDERING OF THE SUBJECT AREAS**

<table>
<thead>
<tr>
<th>System</th>
<th>Rank</th>
<th>Subject</th>
<th>Adjusted Percentage</th>
<th>Collecting Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original scheme</td>
<td>1</td>
<td>Family Therapy</td>
<td>55.6</td>
<td>M.A.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>American Novel</td>
<td>38.1</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Modern British History</td>
<td>26.2</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Medieval French Literature</td>
<td>22.9</td>
<td>M.A.</td>
</tr>
<tr>
<td>Permutation A—4-3-2-1 scoring system for 4 levels</td>
<td>1</td>
<td>Family Therapy</td>
<td>58.4</td>
<td>M.A.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>American Novel</td>
<td>46.9</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Modern British History</td>
<td>32.0</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Medieval French Literature</td>
<td>26.9</td>
<td>M.A.</td>
</tr>
<tr>
<td>Permutation B—40-20-10 scoring system for 5 levels</td>
<td>1</td>
<td>Family Therapy</td>
<td>63.9</td>
<td>M.A.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>American Novel</td>
<td>62.0</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Modern British History</td>
<td>40.7</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Medieval French Literature</td>
<td>39.3</td>
<td>M.A.</td>
</tr>
<tr>
<td>Permutation C—3-2-1 scoring system for 3 levels</td>
<td>1</td>
<td>American Novel</td>
<td>64.5</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Family Therapy</td>
<td>52.7</td>
<td>M.A.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Modern British History</td>
<td>44.1</td>
<td>Ph.D.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Medieval French Literature</td>
<td>37.3</td>
<td>M.A.</td>
</tr>
</tbody>
</table>

family therapy and medieval French literature—should rank in the two lower positions (three and four).

This problem does not seem as serious as the problem posed by inconsistencies in the results between tests I and II because it does not necessarily cast doubts on the technique's reliability, although this factor is, of course, a possible explanation for the deviations from the collecting levels. The divergence could conceivably indicate that the "reality" of our collection does not meet the "ideal" stated in the book selection policy. And, after all, this is the type of information an evaluation technique is supposed to tell us. An alternate explanation for the exceedingly high score for the field of family therapy could lie in
its nature as a discipline. It is a fairly new discipline with a relatively narrow scope. Consequently, the citations were relatively recent and more likely to be in the collection. A discussion of the relationship between the publication date of the work searched and the probability of its being found in the collection is presented at a later point. In short, the explanation for the lower than expected correlation between the relative rankings and the book selection policy is not readily apparent. It could be due to any of three possibilities, or a combination thereof: (1) a defect in the evaluation technique; (2) the distinctive nature of family therapy as a discipline; or (3) a failure of the University of Manitoba collection to correspond to the standards set in the selection policy. However, the uniqueness of family therapy seems, in all probability, to be the most decisive factor.

Even if the problems discussed above did not exist, the basic question of how one evaluates the scores would still remain unanswered, a difficulty Lopez himself recognized. What score signifies the minimal level of adequacy in a subject area? What score a superior collection? One just does not know. In order to answer these questions one would, at a minimum, have to have some basis of comparison, such as scores obtained at other libraries using this method or a considerable number of scores that had been compiled at the same library. Needless to say, until one knows what constitutes a good score, the potential for applying this method in a formal sense as an evaluation tool is limited.

**VALUE OF METHOD AS A MEASURE OF COLLECTION DEPTH**

One can be confident, however, that despite these difficulties the technique would measure the depth of the collection in a specific area.* In other words, it would measure how good the collection is for research purposes. The data gathered at the University of Manitoba support Lopez' assumption that the older the publication the greater the effort required to locate it and that the expenditure of effort will be cumulative at each succeeding level. The following summary of successful searches at each level shows this effect clearly. At level one, 164 of the 200 searches attempted (82 percent) were successful; at level two, 114 of the 158 searches attempted (72.2 percent) were successful; at level three the successful searches declined to 67 percent (65 of the 97 attempted being successful); and at level four only 63.9 percent were successful, since of the 54 searches attempted only 34.5 were found (the citation referring to a multivolume set, of which only half were in the collection, was recorded as 0.5). Though the decline is not dramatic, the percentage of successful searches has declined at each higher level.

As we carried out the experiment, we became aware that material with a recent imprint date was more likely to be in the collection than

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*Lopez does not explicitly state that his method is intended to measure the depth of a collection. However, this is the obvious import of the technique as the procedure of tracing references backwards in time to earlier sources approximates the process used by a library patron doing in-depth research in a particular subject area.
items with an earlier imprint date. An examination of the imprint dates confirmed this impression, a finding that is consistent with other collection-evaluation studies completed in our library and one that was not unexpected since there has been a major effort to develop our research collection during the last decade. Whether or not one would find the same pattern in other academic libraries is an intriguing question.

With the Lopez method it is inevitable that the citations at higher levels will be to works with earlier imprint dates. The fact that this result was obtained from our study also is neither particularly significant nor surprising. But because the works cited at the higher levels are older and more difficult to obtain, the Lopez technique does actually measure the depth of the collection for research purposes in a particular subject area.

CONCLUSIONS

In summary, at the University of Manitoba libraries we experimented with the Lopez technique because we regarded it as a potentially valuable tool for obtaining quickly a qualitative measure of the depth of the collection for research purposes in a specific subject area. Two samples were studied to provide a basis of comparison that would test the reliability of the method. Discrepancies in the scores between the first and second samples and the lower than anticipated correlation between the actual results and the library's book selection policy cast doubts upon the reliability of the method. The data collected about imprint dates and successful searches at each level, however, indicate that this technique actually does measure the depth of the collection and, consequently, would constitute a valid evaluation tool if the problems encountered could be overcome. Perhaps further experimentation could establish the reliability of this technique or some permutation based on its fundamental concept. If so, an extremely useful evaluation method would be available to academic libraries.

ACKNOWLEDGMENTS

The author acknowledges the assistance of his colleagues, Ruth May, chief bibliographer, Sharon Tully, and Verona Dechene, each of whom participated in the experiment and provided suggestions for the paper. He also thanks Peter Marshall, Glen Kunzman, and his wife, Claire, for their valuable suggestions.

REFERENCES


9. Ibid., p.469–70.


Management Information Aspects of Automated Acquisitions Systems

J. Michael Bruer

This paper discusses management needs for timely, appropriate, and comprehensive acquisitions information, noting that the requirement for summary and exception reporting mandates on-line, rather than off-line, automated acquisition systems. The extent to which present-day automated acquisition systems are likely to be fulfilling these needs is assessed on the basis of responses to a Resources and Technical Services Division/Association of American Publishers questionnaire.

At a recent library conference, one of the speakers asked for a show of hands from the audience as an indication of the number who considered themselves to be managers. The speaker was somewhat taken aback when almost all of the hands were raised; yet, in a very real sense, the response in this instance should not be surprising. The point is that management is a term that can refer to many levels of policy and responsibility. It is a mistake to assume that management and the consequent need for management information applies only to the highest levels of administration. To some degree, management is a problem and a process at all levels of an organization, even at the individual project level. Nevertheless, in order to provide a particular focus, this paper will emphasize higher level management implications of automated acquisitions systems, since good decisions are absolutely crucial at this level in terms of system evaluation, selection, and implementation.

It has been said that the one universal characteristic of management and managers is that the more you manage, the less you do. However valid that observation may be in terms of managers we have known, there can be little doubt that the more one knows, the better one can manage. Another way of looking at this concept is to suggest that the essence of good management is good information. And in this sense, management as a function may be defined as interpretation of information so that appropriate decisions can be made.

But the management information delivered by any given system

should have certain characteristics, including timeliness, appropriateness, and comprehensiveness. In order to emphasize this point, the assumption is made in this paper that we are dealing with on-line systems, and that off-line, batch-process acquisitions systems are incapable of providing the right information, in the right format, at the right time. Validation of this assumption may be found in the fact that most systems developed in recent years have been on-line systems, frequently based on stand-alone minicomputer main frames.

Effective management is dependent upon effective reporting; and this, in turn, is dependent upon the balance between summary and detail in the reports. The distribution of expenditures by department and fund, for example, is essential to budget control, and statistical summaries of performance are useful in competitive evaluation of vendors.

It is readily apparent that comprehensive, detailed, batched reports would be of little value in these cases. A list of all the books that have been sent to cataloging would not provide a focus on those that have been overlooked or lost. An overdue-in-cataloging report, on the other hand, provides exactly the required information. Vendor performance data on the delivery of all items individually would swamp the manager with meaningless detail. The detail is vital in particular cases as, for example, when the status (on order, in cataloging, etc.) of an individual book is needed, but printing a thick volume of these data for all books would be wasteful activity. The need is more effectively satisfied by a direct inquiry of the data base. An on-line acquisitions system produces few comprehensive reports; rather, it uses summary and exception reporting, supported by inquiry facilities, to give library management the information needed to perform its job.

An acquisitions department serves a variety of functions and individuals, both inside and outside the library. As a result, it is difficult to suggest a simple statement of system objectives. It has been said that the objective of an on-line acquisition system is to assist in getting the right book on the shelf as quickly as possible. But this is the objective of any acquisitions system, whether manual, batch process, or on-line. It is vitally important, therefore, that management personnel have good information regarding the status and performance of the existing system even before making the decision to investigate alternative systems, on-line or otherwise, let alone committing funds to a new implementation. The manager must be wary of his systems staff, a tribe that has been known to get carried away with enthusiasm in developing new systems for their own sake. It is quite possible that a large-scale change in the existing acquisitions system is not necessary, and may even be more expensive and counterproductive. The acquisitions librarian is likely to be a better source of information than the systems staff and is consequently in a better position to advise management with reference to potential changes in the system.

In this connection it is interesting—perhaps one should even say alarming—to note that the RTSD/AAP survey data reveal that ten of forty systems surveyed were not based on detailed study before initiat-
ing planning for automation.* And many of the studies that did take place relied on acquisitions personnel for information and interpretation either very little or not at all.

Once the decision has been made to implement a new system, the manager must consider the synergistic aspects of the system being proposed. If the basic objective of an acquisitions and processing system is to deliver library materials to the shelf ready for use as quickly as possible, it is important to take into account the interface between the acquisitions system and other systems within the library. When a library has two or more computer-based systems in operation, information should be transferable among systems, in any direction, in machine-readable form. In some cases, this information is held in a shared data base that may be accessed directly by each of the systems. In other cases, the connection is indirect; for example, data may be transferred from one system to another by disk file copies, or by a communication link.

The point is that acquisitions does not operate in a vacuum; it is tightly coupled to collection development, cataloging, serials, and circulation, and perhaps somewhat less so to reference and other service operations. Yet, it is all too often the case that systems are designed that will not accept file loading from other systems or will not dump files or portions of files for related use elsewhere, even within a single systemic environment. Consequently, these systems, which develop information independently of their relation to other systems, are of very limited value to the manager and may even impede the orderly development of library procedures and services.

One of the penalties that must be paid for improper or inadequate interfacing is the consequent need for redundant keyboarding of data, a factor that has financial as well as management information implications. The RTSD/AAP survey data show that almost twice as many libraries must rekey bibliographic source data as are able to transmit directly. And a rather large number of libraries failed to answer this question at all, an oversight that leads one to suspect that they depend heavily on data reentry as well.

Most of the systems surveyed provided basic management information, including, for example, expenditures by department, fund, order type, language and subject codes, and vendor performance statistics (though, curiously, only seven provided staff performance statistics). Very few produced all of the data that would be useful to managers,

*Editor's note: As a source of data for the “Automated Acquisitions” state of the art presentations at the 1978 ALA conference, approximately 140 questionnaires were mailed to libraries, networks, and commercial firms known to have been or to be developing automated systems applied to library acquisitions. Of the forty-five responses to the RTSD/AAP survey complete enough to be usable, eight were from public or county libraries, twenty-six from academic libraries, and eleven from special libraries, networks, or commercial firms. In the spring of 1978, the Association of Research Libraries also undertook a survey of automated acquisitions systems in ARL libraries. The results of that survey were still available as of July 1980: Association of Research Libraries, Office of Management Studies, Automated Acquisitions in ARL Libraries, SPEC Kit no.44 (Washington, D.C., 1978).
and even fewer provided collection development information or permitted interaction with cataloging and circulation. Some libraries responded to questions about management information and interfacing with answers such as “None,” “Does not interface,” and even “[Acquisitions] has nothing to do with Management/Collection Development.”

On the other hand, when system interfacing has been properly designed, the manager can expect a significant payoff. One library reported in the survey that it anticipated the ability to interface its automated acquisition system with that of two other libraries, thus coordinating their systems design in order to aid collection development, avoid unwanted duplication, reduce redundant keyboarding of data, and other related benefits. Other libraries claimed to have the ability to calculate and measure collection growth in all areas including departmental libraries, and one system provides a monthly “interstatus flow” report that tracks material at each of forty-five processing stations.

Generally speaking, however, management information beyond the department level, at least in the systems surveyed, is fairly basic, one might even say rudimentary, and provision for interfacing with other systems and processes is almost nonexistent. It is true that quite a few libraries did report interaction with activities outside of acquisitions, but checking a file in one system and hand carrying the data to another does not constitute a system interface. One library claimed to have a fully integrated system, but answered very few of the questions in the survey, did not substantiate the claim in the answers it did provide, and failed to answer any of the evaluation questions.

In summary, the RTSD/AAP survey data indicate that most of the automated acquisitions systems being implemented today are of the on-line type, providing basic management information of the kind appropriate to that environment. Increasingly, these systems are becoming available from the commercial sector in the form of standalone turnkey packages. Normal internal performance and processing data appear to be more than adequate, and certainly superior to the data available in batch process or manual mode. And many libraries reported some mitigation of the problem of labor intensiveness so endemic to acquisitions processes, and a reduction in the rate of increase of operating costs.

But the survey data also reveal in many cases a curiously inadequate amount of planning for automation, especially manifested by the absence of interfaces between systems and the high degree of redundant keyboarding. It is also clear that sophisticated management information, beyond what is required to monitor internal processing, is not yet widely available. In particular, it would seem that a great deal of work remains to be done with reference to the generation of data to support collection development and resource management. It is possible that the almost total lack of standards and standard definitions impedes the rate of progress in this area.
Cataloging Administrators' Views on Cataloging Education

Cynthia C. Ryans

One of the basic questions in structuring a cataloging and classification course in a graduate library school program is the importance of teaching the course in the theoretical versus the practical mode or a combination of the two. This article reports the results of a survey of cataloging practitioners on their opinions on the following issues: (1) structure of the cataloging curriculum in today's graduate library school; (2) relationship of the use of computers in cataloging to the cataloging curriculum; and (3) adequacy of preparation of current graduates for positions as catalog librarians.

Basic cataloging and classification courses in the United States tend to be focused on teaching the overall background of the subject, i.e., aimed at the general librarian, not at the practicing cataloger. While it is generally agreed that all practicing librarians need a fundamental understanding of cataloging, the nature of these courses and the emphasis given to this requirement do vary. Further, instructors in the course may well give special emphasis to theory, to practice, or to some combination of the two.

In an effort to assure that what is learned by the student is useful in his or her career, interaction is often established between the library school faculty member and the university's catalog department. There is still much discussion, however, as to whether the basic orientation of the course should be a theoretical or a practical one. For example, Thompson believes that:

On every level of practice there is the need of theory. At one level, we can view theory as necessary because it helps us determine what is important or relevant to what we are attempting to do. . . . On another level, theory helps us organize and logically relate information and ideas so that our practice has clear direction and purpose.1

In fact many practitioners hold that it is impossible to learn the principles of cataloging effectively without first learning the theory behind the principles. Others prefer a more balanced combination of theory and practice. Lubetzky stated the need for teaching both theory and how-to-do-it cataloging courses:

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In a library school whose objective, as that of a professional school, is to cultivate not only practitioners but also thinkers and critics of the art, not only followers but also leaders of the profession—librarians who will not only carry on but also advance the art of the profession—in such a school it is proper to treat the subject of cataloging not as a how-to-do-it routine outlined in so many rules, but rather as a problem in the design of a methodological system to facilitate the exploitation of the library’s resources by its users. 

Brown states that “perhaps realistically, most basic and secondary level courses will continue to be a blend of solid foundation through principles and theory with practical experience gained through assigned problems or supervised laboratory.”

Theory vs. Practice

There are many definitions of theory. Kolasa defines theory as “a set of facts that the researcher believes is isomorphic with the real world. It must be in a state able to be tested.” According to Kuhn, “a theory is a hypothesis which has been partially tested and still remains tenable.” Carl White states in his book that “the function of theory in science is to put things known, believed or conjectured (hypothesized) into an orderly system to give them sense, comprehensive intelligibility.” Thus, it can be seen that when applying these definitions to the structure of a cataloging course, theory can be important.

There is a feeling that theory is important in providing a basic understanding in any field, including cataloging. It is impossible to teach a student all he will need to know twenty years hence. However, with a good theoretical background it will be much easier for him or her to adapt to new trends in cataloging. If cataloging were taught purely in a practical mode, it would be more difficult to respond to future information needs. Cataloging rules and procedures are constantly changing. As we have seen, the ALA cataloging rules have been revised several times and there is now a second edition of the Anglo-American Cataloguing Rules. Also many libraries are now using the ISBD standards. Therefore, it seems that a good basic background of cataloging theory taught in library schools would be useful in preparing the future cataloger for change in procedures over the years. Shera stated that “it is, therefore, the responsibility of library educators to project into the future a rational estimate of what librarianship will be like forty years hence, and thus train their neophytes to meet the needs of tomorrow.”

We now see the continued use of the computer in cataloging. There are some of today’s practicing catalogers who have had little or no training in computer science during their library science program. However, the cataloger with a good basic background in theory will have a much easier time adapting to innovations such as the use of the computer or any other tool or technique that may be developed in the future.

The Survey

The survey was conducted to determine the feeling of practitioners on the importance of cataloging courses in the library school curricu-
lum as well as the most useful approach to teaching a cataloging course to prepare a student to become a qualified cataloger. A highly structured questionnaire was developed by the author and sent in 1977 to the head of the catalog department in the library at each of the universities that have American Library Association-accredited graduate library programs. Of the sixty questionnaires sent out, forty-two were returned, a 70 percent response.

The questionnaire was designed to determine practicing catalog professional/administrators' views on a variety of topics relating to cataloging education, in particular, their attitudes regarding theory vs. practice, cataloging course content, new trends in libraries, such as computers, the attitude of the practicing librarian on hiring new as opposed to experienced MLS graduates, and the future needs for catalog librarians. Further, the role of computerized systems in the cataloging process was explored.

The department heads were also asked what type of qualifications they expected a beginning cataloger to have and the types of specific knowledge that is expected on the job, such as research procedures, knowledge of computers, etc.

The respondents to this survey indicated that they believe theory is a very important element in the teaching of cataloging in the graduate library school. Thirty-nine of the forty-two respondents (93 percent) said that they think the quest for theory is a worthwhile objective, while three respondents (7 percent) responded negatively to this question (see table 1). However, these respondents did not believe that the courses should be taught strictly from the theoretical point of view, although a slight majority think that theory is more important than technique. In response to the question “Do you feel that knowing cataloging techniques is more important for graduate library science students than understanding cataloging theory?” eighteen of the respondents (43 percent) answered in the affirmative while twenty-three (55 percent) answered no to this question. One person thought that cataloging techniques and theory are equally important in cataloging courses. This finding indicates that the library practitioners believe that theory is an important dimension of the graduate cataloging course.

To a question asking if cataloging theory has major applications that can be used effectively by the cataloger, again the response was positive. Thirty-seven (88 percent) replied yes to this question while four (10 percent) replied in the negative.

The results of the questions on the cataloging curriculum indicate that theory is very important. Theory alone is not sufficient, however, as indicated in the following responses from catalog department heads regarding course structure.

First, all the respondents indicated that they believe that a cataloging course should be a basic offering of any library program (see table 2). However, thirty-seven (88 percent) believe that if only one course in cataloging was taken by a graduate library science student, it should be oriented to practice rather than to theory. Such a response is open to various interpretations, including the view that students cannot
TABLE 1
VALUE OF TEACHING THEORY IN CATALOGING COURSES

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Both</th>
<th>NR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel that the quest for theory in cataloging is a worthwhile objective?</td>
<td>39 (93%)</td>
<td>3 (7%)</td>
<td></td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Do you feel that knowing cataloging techniques is more important for graduate library science students than understanding cataloging theory?</td>
<td>18 (43%)</td>
<td>23 (55%)</td>
<td>1 (2%)</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Do you feel that cataloging theory has major applications which can be effectively utilized by the cataloger?</td>
<td>37 (88%)</td>
<td>4 (10%)</td>
<td>1 (2%)</td>
<td></td>
<td>42</td>
</tr>
</tbody>
</table>

understand theory as easily in a beginning course as they can after they have been exposed to cataloging procedures, or the feeling that with so little required cataloging being offered in the programs, the stress must be on applications.

Although all the respondents indicated that they think that cataloging is a basic course in the library science curriculum, many believe that the existing academic curriculum in cataloging is incomplete. Thirty-two (76 percent) think that the curriculum is incomplete while four (10 percent) think that it is complete.

The opinions of the respondents were varied as to whether they believe the amount of theory being taught in the cataloging courses today is adequate. Ten (24 percent) believe that there is too little theory being taught, fifteen (36 percent) believe that there is enough, while twelve (28 percent) believe there is too much. Five (12 percent) did not respond to this question. Obviously, this is a question of perception and, therefore, the actual amount is not the relevant issue. Rather, this response indicates satisfaction or dissatisfaction with the products of library schools today.

The overall response to these questions indicates that the respondents think that theory is necessary but should be mixed with the practical approach to cataloging. Many practitioners seem to think that once students learn the basic concepts behind cataloging, then the various rules will just fall into place when they begin their work experience. Others appear to think that since there is much to be learned on the job, good course work should give a student the basics in order to make job experience more productive.

PRACTICAL EXPERIENCE

To allow the students to obtain some cataloging expertise outside the classroom, a few catalog departments cooperate with the library schools at their universities by permitting the students in the catalog-
TABLE 2

<table>
<thead>
<tr>
<th>EFFECTIVENESS OF COURSE CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Do you feel that cataloging is a basic course in any library school curriculum?</td>
</tr>
<tr>
<td>Since the first cataloging course taken by a graduate student is sometimes his or her only cataloging course, do you feel it should be “practical application” oriented?</td>
</tr>
<tr>
<td>Do you feel that the existing academic curricula in cataloging at most library schools is frequently incomplete?</td>
</tr>
<tr>
<td>Do the students in library school who are taking a cataloging course catalog any books during the term in cooperation with your department?</td>
</tr>
<tr>
<td>Do you feel that the type of course work presently available in most library schools adequately prepares students for positions in cataloging?</td>
</tr>
<tr>
<td>Do you feel that the actual procedures of cataloging in a university library catalog department reflect the way cataloging is taught in library schools?</td>
</tr>
</tbody>
</table>

The effectiveness of course content is assessed by cataloging administrators. The table shows the distribution of responses to various questions regarding the adequacy of cataloging courses in library schools. The responses range from 42% to 100%, indicating varying levels of satisfaction or need for improvement in the cataloging curriculum. The table highlights the importance of practical application and hands-on experience in the teaching of cataloging, as well as the necessity for a comprehensive curriculum that prepares students for real-world cataloging positions. The data suggest a need for more practical-oriented courses, given the relatively low percentage of students who engage in cataloging during their terms in cooperation with their departments.
Dewey system, which is not as widely used in academic libraries as the Library of Congress system. They also think that there is inadequate coverage of the cataloging of serials and periodicals. Some respondents indicate that their library schools do offer some practical experience in cataloging that is not part of the cataloging course curriculum. Also, workshops on topics such as OCLC have been offered to graduate library school students, permitting interaction between the practitioner and the library science student.

The cataloging practitioners further indicate that students are not adequately prepared for a position as a cataloger upon completion of their degree, especially since they tend to believe that the way cataloging is taught in library school does not reflect actual cataloging procedures. In fact, only six (14 percent) of the respondents believe the programs reflect actual cataloging procedures. It should be pointed out here, however, that a library school cataloging course does not simply prepare students to work in a university library but also must prepare them to be librarians in special libraries, school libraries, etc. Still this very strong view tended to reinforce the dissatisfaction with the current cataloging preparation of MLS students noted above.

The majority of respondents prefer to hire their staff directly out of library school, a fact that seems to indicate that they prefer to train them in their own library procedures rather than to hire someone who has had on-the-job training at another institution. (Naturally, this finding could also reflect current budget realities.) Twenty-five (60 percent) of the department heads responding to the questionnaire indicate a preference to hire new employees just out of library school, while eight (19 percent) require their new employees to have a minimum of two years' experience. Four (nine percent) indicate that they hire both new and experienced catalogers. Five (12 percent) did not answer this question.

The question arises as to how the advent of the various computerized cataloging data bases throughout the country has affected the content as well as the quality of cataloging courses in graduate library schools. Having full cataloging records easily accessible via a screen and the opportunity to order catalog cards, alphabetized and ready to file, by merely pushing a button can, in some libraries, offer an opportunity for staff reduction. However, the professional is still needed to catalog material not in the data base and to verify material that is in the data base to which a library wants to add its holdings. These are only a few of the ways professionals are still needed even with an online cataloging system.

How does the use of an on-line cataloging system in university libraries affect the teaching of cataloging? The catalog department heads in the libraries surveyed were asked if they believe that the use of an on-line cooperative cataloging system in many libraries has replaced the need for cataloging courses in the library school. All of the respondents answered no to this question (see table 3). In response to another question asking if such a system has lessened the need for cataloging courses in library school, still the majority (93 per-
cent) believe that it has not. In fact, only three (7 percent) believe that it has.

Thirty-seven (88 percent) of the libraries responding indicated that their library does participate in a computerized cataloging system, while only five (12 percent) do not. In addition to the five libraries that do not participate, only four respondents said that they have no in-house training for a cooperative cataloging system. Two of those using a cooperative cataloging system did not respond to this question. Although the respondents do think that a course in cataloging is important in the library curriculum, the majority (thirty-one, or 74 percent) indicate that they train their staff in the use of the computerized system. This does not mean that they do not want the library school to provide a background in this area, only that they teach new staff how their particular library makes use of their system. Since there were only five institutions that responded to the questionnaire that do not use a computerized cataloging system, it is assumed that these five fall into the “no” or “no response” category of having no in-house training.

### TABLE 3

**Cooperative Cataloging**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>NR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel that cooperative cataloging (OCLC) has replaced the need for cataloging courses in the library school curriculum?</td>
<td>42 (100%)</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you feel that cooperative cataloging has lessened the need for cataloging courses in the library school curriculum?</td>
<td>3 (7%)</td>
<td>39 (93%)</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Does your library participate in a computerized cataloging system such as OCLC?</td>
<td>37 (88%)</td>
<td>5 (12%)</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Do you have any in-house training for a computerized cataloging system?</td>
<td>31 (74%)</td>
<td>9 (21%)</td>
<td>2 (5%)</td>
<td>42</td>
</tr>
</tbody>
</table>

**CONCLUSIONS**

The study reported here represents the attitudes of the catalog department heads in forty-two libraries across the country on teaching theory versus practical cataloging in the graduate library school. Further, it explores other attitudes regarding curriculum, future opportunities in cataloging, cooperative cataloging, etc. The findings indicate that the respondents overwhelmingly believe that theory is important in the cataloging curriculum. However, they believe that theory in itself is not enough and should be combined with the practical side of cataloging. Clearly, the majority of respondents believe
that the students coming out of library school into the current job market are not as well prepared for a position as a cataloger as they would like them to be. Perhaps this situation could be alleviated if there were more cooperation between the library school and the catalog department. Practicing catalogers could teach sessions of the catalog course, or even teach the entire course for one term. Or the academician could work on a part-time basis (or for a summer) in the catalog department in order to learn the cataloging procedures in that particular library. This practical knowledge plus the theoretical approach to cataloging would perhaps provide a more complete cataloging background in order to prepare more adequately the graduate library science student for the job market. If neither of these two approaches is feasible, cooperation by the academician and the practitioner in planning the course structure for a cataloging and classification course would be of value.

The respondents did indicate that they preferred to hire new staff out of library school and train them rather than hire experienced catalogers. Since each library is unique in its cataloging procedures, it is hard for any library school to train students for positions in different libraries. Training a new library science graduate with a good theoretical background in the procedures of any particular library would be more efficient for both the student and the catalog department.

The respondents also indicate that very few catalog departments cooperate with on-the-job experience for students in the cataloging courses offered at their university's library school. Programs such as practicum programs and internships give the library science student very good practical experience, even though they are not offered as part of the cataloging curriculum. In some institutions, interns or practicum students are placed in the same libraries where they did their student work. This is an advantage for both the student and the library in reducing the training time involved for a new employee. Perhaps if programs such as these could be initiated, there would be fewer criticisms about the preparation of the MLS student.

Cataloging of the future is leaning more toward the use of computers, but the respondents indicate that the use of computers does not lessen the need for cataloging courses in the library school curriculum for cataloging professionals. Although the majority indicate that they do train their staff in the use of the computer, some graduates will not go into library situations where the computers are now being used. Therefore, it would appear that a combination of practical knowledge in the use of computers in cataloging plus theory would be a useful plan for teaching computer courses. The student then would have background knowledge that could be applied in a library where computers are used.

Finally, the majority of the respondents think that theory should be incorporated into the cataloging curriculum along with the practical aspects of teaching cataloging, but they also think that if only one course is taken by the graduate student in this area, it should be more practical in nature.
REFERENCES

A Computer-Produced Serials Book Catalog with Automatically Generated Indexes

Helen H. Spalding

The serials book catalog of the Iowa State University Library provides access to some 33,000 serials records by titles, corporate bodies, and subject headings. These access points are generated automatically from the central serials data base by a unique computer program that was locally written to allow great flexibility in the manipulation of records. A wide distribution of the catalog on and off campus assures maximum access. Local control of the catalog production permits expansion of the program format by the creation of local tags and linkage to related monograph records in the card catalog, while providing a basis for the further automation of serials control.

A UNIQUE SERIALS CATALOG at the Iowa State University Library is the sole public source of bibliographic information describing the library's serials collection. The catalog consists of two annual bound volumes and is updated by a monthly, loose-leaf, cumulative supplement. In volume one are approximately 33,000 complete bibliographic records listed by title. The second volume contains two indexes, automatically generated by the local program: the corporate body index, which gives titles and call numbers for corporate body main and added entries, and the subject heading index, which lists titles and call numbers under the appropriate Library of Congress subject headings. The supplement updates all three sections, cumulating each month. The library developed the catalog in a sequence that enabled the program to grow in sophistication while compensating for budget restrictions. This article describes the chronological development of the Serials Catalog that resulted in the unique features of the local program.

CREATING THE SERIALS DATA BASE

In 1969, the three regents' institutions in Iowa, Iowa State Universi-

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Serials Book Catalog I 353

ty (ISU), the University of Iowa, and the University of Northern Iowa, began the conversion of their serial records to MARC II format. ISU and the University of Iowa had been maintaining separate files of currently received periodical titles on magnetic tape. The use of MARC II would allow them to standardize the format and, with added modifications, create a union list among the Iowa state universities to link with larger networks. The initial conversion used eleven MARC tags. The union list never materialized, but Iowa State University decided to produce its serials list in a book catalog because its tape file had been upgraded to a list of all currently received serials in the process of conversion. The catalog appeared in July 1973 and consisted of one volume, listing by main entry all currently received serials, their call numbers, locations, and holdings.

At this point, the library outlined a long-range plan that would automate serials cataloging completely. This outline projected stages in which the serials data base would grow progressively from a system with main-entry access to records batched for updating in a book catalog, to a system with multiple access to records updated in an on-line system. The first phase of this plan included the correction and refinement of the bibliographic data so that the remaining serials information gathering and retrieval would modify accurate, descriptive records. During this phase, the staff continued to maintain complete serials information in the card catalog. This phase was to conclude with a regularly scheduled book catalog that would replace the serials information in the card catalog.

Because of the heavy public use of the Serials Catalog it was decided to include ceased titles in the April 1974 edition and to improve the quality of the information. The staff expended only 700 hours entering additional titles and information and correcting obvious errors. This effort lengthened the file to approximately 27,000 titles. Five additional tags in the program format enabled the staff to input more bibliographic description.

Decisions concerning cataloging practice also affected the content of the Serials Catalog. At the close of 1973, the library adopted successive entry cataloging for serials with title changes occurring after May 1971. As the Guidelines for ISDS (International Serials Data System) and the ISBD(S) (International Standard Bibliographic Description for Serials) were developed and considered by the AACR revision committees, the serials catalogers decided to follow them for determining the unique titles of serials.

These changes appeared first in the catalog of serials listed by main entry that was distributed in September 1974. A monthly, cumulative supplement updated it. As a new user aid, catalogers placed a reference card in front of the first series added entry for analyzed issues in the card catalog. This card referred users to the Serials Catalog for complete information about the series if the analyzed monographs with the series added entry did not provide the needed information.

During this phase of the catalog’s development, study of trends in cataloging and recognition of the unique retrieval aspects of a comput-
er-produced book catalog led to the decision to resequence the Serials Catalog and the check-in records in the serials Kardex to title entry.

RESEQUENCING TO TITLE ENTRY

Previously, serials with generic titles had been entered by corporate body main entries because the titles were common or nondistinctive apart from the corporate headings. But changes in AACR and LC practice reduced this need. Cataloging Service no. 108 announced the deletion of AACR I rule 162B so that each title would be recorded in full, including the name, or abbreviation, or initials of the name of the corporate body. Cataloging Service no. 109 stated that in LC entries titles consisting only of generic terms would be made distinctive by adding a space-hyphen-space and the author statement. For several years the ISU Library bibliographic searchers had found the LC depository card file and the library on-order file easier to search by title. The library staff felt confident that unique bibliographic records could be identified more readily by using title entry for its serials, especially since the records would be listed in the book catalog format with accompanying indexes of added entries.

Also affecting this decision was the belief that user access would be facilitated by arranging serials by title. The patron would no longer need to guess at whether a serial was cataloged under title or corporate body and would not need to figure out the correct form of any corporate body main entry. Many indexing and abstracting tools cite serials by title, providing the user with a title entry to begin a search. Impressions of the difficulty users had in manipulating corporate body main entries were supported by user studies elsewhere. Tate reported a study of a random sample of bibliographical citations that concluded, “the type of entry least efficient in locating material was the corporate author,” and, “the title is a more efficient finding device than the main entry.” The Atomic Weapons Research Establishment, Aldermaston, did a survey of users' requests for books and found that “the title information was completely accurate for more than 90% of the sample, while the comparable figure for author information was under 75%. In nearly all cases titles which were incorrect and untraceable were the result of inversion or the omission of commonplace descriptors such as ‘report’ or ‘outline of.’”

The capabilities of the computer-produced book catalog format further supported the logic of resequencing to title entry. Corporate body and subject indexes would accompany the volume of serial titles that contained full bibliographic information. The user who knew the sponsoring organization but was not sure if the needed title was “Annual report,” “Report,” or “Company report” could be referred by the corporate body index to the appropriate title in the title list. The concept of “main entry” would be irrelevant in a system where one could retrieve any part of the bibliographic record by a relevant field in the machine-readable format. Further, by ignoring all internal prepositions and articles in the filing of titles, a patron could scan a page of “proceedings” and easily find the desired title without worrying
about whether it was "Proceedings of the Organization," "Proceedings—Organization," "Proceedings for the Organization," etc. This practice already was in use by several indexing and abstracting sources, such as Chemical Abstracts.

The Serials Department planned to resequence to title entry its check-in Kardex, which had been arranged by main entry, when the Serials Catalog went to title entry. Retaining conformity between the two files would facilitate their use. Reference librarians could handle questions about current issues of an entry in the book catalog by looking for the check-in card in the Kardex under the same entry. Processing new titles and bibliographic changes would flow more smoothly if both the Kardex and Serials Catalog continued to have the same entries. The clerks checking in a publication could use the title as it appeared on the title page, rather than guessing at the form of the main entry, to find the check-in record. The check-in staff could identify title changes or ambiguous titles in the Kardex by use of the copies of the corporate body and subject indexes, handily located on top of the Kardex. At a future date, checking in could be automated off the same data base as the catalog because of the identical entries.

The Kardex resequencing project took place before the final production of the September 1975 Serials Catalog. Using ISBD(S) guidelines, the catalogers qualified or made distinctive duplicate or generic titles. About 3,000 of the approximately 11,000 current titles in the Kardex required resequencing from corporate author main entry to title entry. Preliminary planning and marking of the check-in cards prepared for an efficient refiling of the Kardex that took only one working week for the serials acquisitions and records staffs to accomplish. Numerous surprises in the file surfaced during the project, bringing hidden problems concerning current subscriptions to their attention. For the first time, the staff weeded and refiled the Kardex card by card, resulting in a file that was freer of errors than before.

**FURTHER CATALOG DEVELOPMENT**

This flurry of activity resulted in a new way of retrieving bibliographic information for serials at the ISU Library. The first volume of the Serials Catalog issued in September 1975 was by title, not by main entry; the second volume consisted of the corporate body and subject indexes, and a cumulative, loose-leaf supplement updated monthly both of the bound volumes.

The advent of the subject index brought an end to filing subject cards for serials in the subject card catalog, and there were other advantages as well. Both the title volume and the corporate body index contained cross-references for the first time. Title cross-references in previous editions had been sequenced individually just as the record for each entry had to be sequenced. With the new edition, a local tag for title added entries was introduced into the computer program. In this special tag multiple title added entries could be listed and the computer would automatically generate and file title cross-references from the tag. Because the program did not yet provide for assigning
multiple corporate body added entries to any one title, the staff entered only the “main entry” corporate bodies for the first edition of the corporate body index.

The resequencing of the catalog having been completed successfully, students began pulling serial cards from the card catalog, using the book catalog as a guide. Catalogers checked the added entries before they were thrown away and matched the main entry cards to the serial data base, adding any information that had been left out when the titles were input originally.

The first year of the new catalog brought valuable suggestions to the Serials Cataloging Section. The Reference Department appreciated the book catalog format for its handiness at the desk in answering the many research questions needing the current journal literature. They appreciated the easy accessibility of the Serials Catalog, copies of which were stationed throughout the library. Some negative responses were anticipated concerning the long lists of key or distinctive titles for serials with generic titles. For instance, there were twenty-six pages of “Proceedings” titles. But it was found, instead, that the format of the catalog facilitated scanning and the patrons found it easier to scan a page of “Proceedings—American Society of . . .” than it had been to guess at the corporate author, then guess at the form of the main entry before attempting to look for the serial in the card catalog.

In the annual editions that followed more refinements were made. The corporate body index was printed on green paper, differentiating it further from the subject index in the same volume, and cross-references were added to the subject index. The program was expanded to provide for corporate body added entries. A local note tag for analyzed series refers users to the card catalog for the analytics. Other notes refer users to the card catalog for publications related to serials.

FLEXIBILITY OF LOCAL PROGRAM AND PRODUCTION

The new ISU Serials Catalog was designed to fulfill specific local needs and to permit further development. This rationale led to a computer program with features and flexibility unique to that serials data base.

A limitation in the program has always been cost. Within each annual budget of $23,000, one hundred book catalogs, including the monthly supplements, must be produced on the available IBM 370/145-148 dual computer. Because half of the data-processing cost is for printing, an economical print format was selected: All letters print in uppercase because the mix of upper- and lowercase is more expensive, no diacritical marks appear, and spacing and punctuation compensate for the reduced readability of complete capitalization.

Use of university computer and printing facilities saves not only money but also time. Because the bibliographic information of serials constantly changes and requires updating, the Serials Department places a priority on timely supplements to the annual volumes. At present the catalog is produced from start to finish on campus except
for binding. The monthly cumulative supplement is prepared within a two-week period, from the sorting of the keypunch card batch to the delivery of the collated, printed pages ready for insertion in the supplement binders.

Producing the catalog locally and limiting the size of the data base to serials held at the ISU Library allow for the creation of special lists of the titles. Although lists can be generated by any tag or any element of any tag in the program format, four lists are regularly produced and used on campus. These are serial records by call number, by library location, by country of publication, and by active or inactive status. Technical services staff use the list by call number as they would any shelf listing, but because this list is in book format it is easily reproduced and carried to the desired work station. The Circulation Department and the bibliographers use both the list by call number and the list by library location as they inventory or review the holdings in each subject area. Acquisitions staff can use the active/inactive bibliographies for complete listings of ongoing or ceased titles.

This ease of sorting information automatically is the basis for the organization of the catalog and the unique operation of certain tags. By using a programmed algorithm for manipulating the tags and alphabetic elements, the computer assumes the burden of sorting information by title, corporate body, and subject. Both of the indexes are updated automatically whenever a change is made to the main record. This machine manipulation makes maintenance of the access points easier, cheaper, and more accurate than that of a manual card file, which is more subject to human error. The flexibility of multiple access points lessens the importance of a main entry point.

The tags that automatically sort in this manner are the corporate body, title added entry, and subject heading tags, and they do not appear with the main bibliographic record in the title volume. Instead, the corporate body and subject headings sort into their alphabetic lists, producing the two indexes. The title added entries automatically produce “see” references in the title volume. Any change in a title also is reflected in the corresponding cross-reference automatically. When a serial title is deleted from the data base, the title added entries, corporate body main and added entries, and subject added entries are deleted, requiring no manual checking, changing, card pulling, or keypunching.

Cross-references between corporate bodies and between subject headings within the indexes now need to be entered separately. Another local tag can be created to eliminate this manual system by providing the same automatic sort that treats the corporate body, title added entry, and subject heading tags. The cross-references in the indexes are kept up to date by an authority card file that traces for each corporate body name and subject heading the “see also” and “see” references to it. A cataloger removing or correcting a corporate body or subject heading checks this file and deletes the cross-references that are no longer relevant or corrects the cross-references to reflect the changed heading.
The inputting of an index cross-reference or a bibliographic record begins by assigning a unique sequence number to the entry. The keypuncher includes this sequence number on the cards keypunched for each of the tags. Any one tag can be changed without affecting the rest of the record.

Incorrect directions are printed out each month in an error list, allowing the keypuncher to correct such errors in the next batch. With the error list are delivered the master list and public list. The master list is kept in the Serials Cataloging Section, for it includes the complete tag display of all records. Until the next run is made, this is the most complete source of new information. The public list contains the pages the computer has printed for reduction, duplication, and collation into the copies of the Serials Catalog, which does not contain the full tag display.

**SYSTEM BENEFITS**

Besides being the most complete record of serials information the ISU Library has ever had, the Serials Catalog has provided other benefits. Errors are simpler to catch in an easily scanned book format than was possible in the card catalog. The facility of the machine-readable records provides for checking and improving accuracy on a continuing basis as manual maintenance of the card catalog records never allowed. For instance, each time the serials are accessed by a different tag, a few errors surface that otherwise would never have been noticed. If a serials list by location is run, errors in the location and holdings tag are prominently displayed because they appear listed at the end as leftovers the computer could not fit into the correct locations. True, these errors are few in number, but the ease of detection and correction of them is facilitated by the computer capability. Corrections and new information are processed more rapidly with the use of machine-readable records. Now, information particular to a title needs tagging and keypunching, but multiple entry cards do not need to be pulled from a card catalog, corrected, and filed because multiple access is automatic. Deleting the complete record of a title consists of one simple command. Changing an added entry that refers to several titles does not require pulling each title; one merely instructs the keypuncher to change the entry for all titles by inputting each title's local sequence number and the change in the one tag. The computer automatically makes the corrections as instructed. There is no filing to do or to revise because the computer correctly sequences all entries with each printout.

To date, there have been more positive than negative reactions to the use of title entry. The Reference Department staff, who often assist patrons in the use of the catalog, report that patrons find title entry easier to use than traditional forms of entry. Because the titles are more often found in the same form in which they are cited in the literature, the patron does not have to guess the proper main entry. When problems of inaccurate title citations arise, the corporate body index and subject heading index are available. Ignoring all preposi-
tions and articles in the filing has enhanced the scanning advantages of the catalog. Clerks checking in issues at the Kardex are able to identify check-in records faster by title. Previously, it was only the experienced clerk who could spot corporate body main entries on the first try. Title changes are spotted readily upon receipt of the issues with the Kardex filed by title.

Copies of both used and new catalogs are sold nationwide. Each year, a paperback cumulative supplement containing all changes made between the last and current editions is produced. The used catalogs are accompanied by this supplement, bringing the used edition current with the new edition. The ISU Library lends more materials than it borrows on interlibrary loan, and most of these materials are photocopies from serials. Interestingly enough, most catalog purchasers are research and development offices in private industry who are interested in tapping the strong collection of current scientific literature. With personal copies of the catalog, their loan requests are more accurate, facilitating prompt fulfillment. About fifty used catalogs with their updating supplements are distributed on campus to academic departments not having ready access to a library reading room with a current edition.

The AACR revision and the freezing of the LC's catalog in 1981 will affect the plans the ISU Library makes concerning the future of the catalogs. The advantages of working on-line, rather than producing and batching keypunch cards, and the automation of the Kardex have been recognized but have not been acted upon until the institution's overall planning for the future has been completed.

CONCLUSION

Because the ISU Library was not afraid to experiment with the new MARC format and with some new concepts in serials control, the Serials Catalog has more than adequately fulfilled its needs for complete, accurate, and accessible serials bibliographic information. This approach on the part of the library management will provide a basis for future growth in serials bibliographic control insofar as patron needs require and library resources permit. The development of the Serials Catalog exemplifies Gorman's doctrine, "Catalogs are instruments of communication between the library user (and library staff) and the documents the library can make available. Anything increasing this communication is good, and anything detracting from it is bad."  

REFERENCES

6. Ibid., p.185.
8. Ibid., p.271.
Changing from Sears to LC Subject Headings

Thomas Schadlich

This paper briefly discusses the factors that might induce a library to consider changing from Sears to Library of Congress subject headings and provides a quantitative evaluation of the compatibility of Sears and LC headings.

As our national bibliographic system develops, it becomes apparent that libraries maintaining Sears subject headings suffer a disadvantage when they try to tap outside bibliographic resources where Library of Congress subject headings are standard. This problem exists whether one considers commercial MARC-based cataloging services, OCLC, the CIP project, or traditional bibliographic sources such as the American Book Publishing Record, Subject Guide to Books in Print, or Books for College Libraries.

While Sears “followed the form of the Library of Congress subject headings with few exceptions” so a library could “graduate to the full use of Library of Congress headings when collections grew too large for a limited subject heading list,”¹ the availability, currency, specificity and comprehensiveness of LC subject headings compared to Sears subject headings provide strong inducements for libraries, even small ones, to accelerate their “graduation.”

However, the task of changing headings entails a good deal of work, so any library that is considering switching from Sears to LC subject headings needs to know how much divergence can be expected between Sears and its parent LC list in order to decide whether or not the perceived advantages of conversion are outweighed by the problem of changing incompatible headings. Accordingly, this study was undertaken to provide a quantitative estimate of the compatibility of Sears and LC subject headings from the viewpoint of the library with an established Sears catalog wishing to change to the LC system.

Method

A random sample of entries was drawn from a six-months’ run of Publishers Weekly (January–June 1978) assuming that the books pro-

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¹ Thomas Schadlich is the technical services librarian at the Prosser Public Library, Bloomfield, Connecticut. Manuscript received March 1979; accepted for publication September 1979.
duced during this period were representative of the books that an American library would be likely to add to its collection. The issues were bound together, and the pages were numbered consecutively. Page numbers were drawn from a random number table, and three entries chosen from each randomly selected page, one entry from each column, with the entry depending on the digit of the page number that corresponded to the column. A total of 1,220 LC headings was drawn from nonfiction entries and checked against the eleventh edition of Sears. Essentially, this simulated the situation that a library would encounter as it discovered how the headings for new materials fit into the Sears catalog. Each LC heading was assigned to one of three conflict type groups that expressed the relationship of the heading to the Sears list. Group one contained those Library of Congress subject headings that exactly matched Sears headings or had slight differences that would not affect filing. LC headings that did not match the Sears list but did not conflict either were counted in group two. These included headings that were more specific than Sears headings and headings with geographic or other subdivisions not provided in Sears. Finally, the cases where all or part of the LC heading conflicted with Sears so that the existing headings would have to be changed were assigned to the third group. In addition to the conflict type, the Dewey Decimal class number was recorded for each heading to discover if there was a pattern of conflict types among the classes. To facilitate the process of counting, the conflict group numbers and class numbers were tallied by a FORTRAN program.

RESULTS

Table I summarizes the results of the count by conflict type and Dewey class. A $\chi^2$ test at the $\alpha = .01$ level shows a significant difference between the conflict group totals found and what would be expected if the three types of relationship were equally likely. Ninety-five percent confidence interval estimates for the proportion of subject headings belonging to each group are:

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (match)</td>
<td></td>
<td>38% ± 3%</td>
</tr>
<tr>
<td>461 ± 33</td>
<td>1,220</td>
<td></td>
</tr>
<tr>
<td>Group 2 (nonconflicting)</td>
<td></td>
<td>51% ± 3%</td>
</tr>
<tr>
<td>618 ± 34</td>
<td>1,220</td>
<td></td>
</tr>
<tr>
<td>Group 3 (conflicting)</td>
<td></td>
<td>12% ± 2%</td>
</tr>
<tr>
<td>141 ± 22</td>
<td>1,220</td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

A library that is thinking of switching from Sears to Library of Congress subject headings has many factors to consider that affect the magnitude of the task. For example, would the library retrospectively change the headings for older materials? Also, would the conversion
TABLE I

TABULATION OF 1,220 SUBJECT HEADINGS BY
CONFLICT CODE (1, 2, 3) AND DEWEY CLASS (0–9)

<table>
<thead>
<tr>
<th>Conflict Code</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>35</td>
<td>37</td>
<td>102</td>
<td>2</td>
<td>24</td>
<td>95</td>
<td>56</td>
<td>27</td>
<td>65</td>
<td>461</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>24</td>
<td>37</td>
<td>201</td>
<td>9</td>
<td>76</td>
<td>117</td>
<td>61</td>
<td>27</td>
<td>41</td>
<td>618</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6</td>
<td>11</td>
<td>53</td>
<td>3</td>
<td>5</td>
<td>23</td>
<td>17</td>
<td>5</td>
<td>14</td>
<td>141</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>65</td>
<td>85</td>
<td>356</td>
<td>14</td>
<td>105</td>
<td>235</td>
<td>134</td>
<td>59</td>
<td>120</td>
<td>1,220</td>
</tr>
</tbody>
</table>

Conflict group codes:
- Group 1—Exact match between headings.
- Group 2—No conflict between headings.
- Group 3—Conflicting headings.

to LC headings be complete, or would some Sears headings be retained? Yet, the overriding factor is the number of headings that would have to be changed. Factors determining this total are the size of the catalog and the number of conflicting headings expected. The results of this study suggest that with 95 percent confidence, the number of conflicting headings involved in such a conversion would be between 10 percent and 14 percent of the existing Sears headings. With this information, libraries are in a better position to weigh the benefits of Library of Congress subject headings against the work involved in converting.

REFERENCE

In this third volume of The Heritage of Librarianship Series the promised objective of the series is fully met, namely, a "carefully selected" collection of the writings of a prominent librarian accompanied by a "substantive, critical essay" assessing the subject's significance for librarianship, past and present. Francis L. Miksa's biographical and critical essay, based in part on his doctoral dissertation at the University of Chicago, is perhaps even more valuable than the selections from Charles Ammi Cutter's voluminous writings.

The selections are grouped into six categories: library administration, three short papers on fiction in public libraries, the library profession from the "proposed library convention at Philadelphia" in 1876 to a report on the 1902 meeting of the American Library Association, cataloging (more than a third of the writings), classification (almost a third), and a few letters and nonlibrary sketches intended to give a more personal picture of Cutter.

Few librarians today return to the nineteenth century for administrative theory. Rather we look to Cutter for his principles of descriptive and subject cataloging and classification without considering that these were merely a part of a total library philosophy. Miksa's brilliant exposition of the "enculturation process" in Cutter's philosophy of librarianship, with cataloging and classification as tools to serve in that process, is vital to our understanding of Cutter's purposes. ("Enculturation" as used by Miksa [p.69] is the sociologically oriented definition from the Random House Dictionary of the English Language: "the process by which a person adapts to a culture and takes on its values.")

The papers on library administration are interesting illustrations of Cutter's philosophy of librarianship in practical applications if we may include his delightful "Buffalo Public Library in 1983" (p.91–96) as library planning. The three papers on book selection address the question of fiction in public libraries, a heated controversy of the time, and also reflect his library philosophy.

Edith Scott is the chief of the Cataloging Instruction Office, Library of Congress.
Miksa’s selections from Cutter’s writings on cataloging are those “that are essential to an understanding of his key ideas” (p.15). The section includes manuscript material previously unavailable and substantial excerpts from the four editions of his Rules. These latter are especially valuable for the juxtaposition of the rules for corporate entry from all four editions. Miksa’s commentary on Cutter’s principle of “specific entry” in the rules for the subject catalog does much to clarify that frequently misapprehended principle. A tantalizing footnote (n.67, p.73) seems to promise further explication of its more difficult aspects in, we hope, a forthcoming publication.

The section on classification includes papers on Cutter’s book-numbering scheme, the classification system developed at the Boston Athenaeum, and his Expansive Classification. Most of these key papers are not otherwise readily available.

The ten-page section of nonlibrary material consists mostly of travel sketches and letters. The two exceptions are a note, “On Statistics and Remarriage,” and a letter on his plans for the future written to R. R. Bowker a few months before his death. Except for the final letter, this section has little to distinguish Cutter the person from other cultured but slightly pedantic librarians of the late nineteenth century. It is too bad that Nina Browne’s portrayal of the great “Library Systematizer” as an enthusiastic cakewalk dancer was out of scope for this volume.

The thirty-four-page bibliography of Cutter’s writings that completes the work is especially valuable in that Miksa has identified and included so many of Cutter’s anonymous works which otherwise would be lost. The whole volume is, in short, an invaluable addition to the literature on cataloging and classification. It should foreclose any further invoking of Cutter’s name without an understanding of his real meaning.

REFERENCES

In this article the author summarizes the activities of the RTSD Micropublishing Committee Ad Hoc Subcommittee on the Monitoring of Microform Advertising. Beginning in January 1977, subcommittee members compared the advertising of eighty-four American publishers, including all of the major microform producers, against a checklist of elements derived from the American National Standard for the Advertising of Micropublications. Responses were received from 64 percent of the companies evaluated, all expressing appreciation for the subcommittee's effort. The subcommittee also drafted sample microform replacement guidelines and circulated them to ten micropublishers for comment. After resolving that a follow-up study be conducted in 1982, the Micropublishing Committee dissolved the subcommittee in January 1979. Comments are requested from microforms acquisitions and selection librarians regarding the quality of the promotional materials they receive so that the results of the subcommittee's efforts can be more accurately assessed.

Requests for the purchase of library materials in microform can rarely be processed in a routine manner. When given only a publisher's brochure from which to order a microform collection, acquisitions librarians often find themselves confronted with a number of unanswered questions. Before an intelligent selection decision can be made, additional details about the microform collection under consideration must first be ascertained. Factors such as film type and polarity, reduction ratio, production standards, or method of bibliographic control may determine whether the proposed material is compatible with the library's viewing equipment, acquisitions policies, or cataloging standards. Without detailed bibliographic information on the contents of large collections, the library risks duplicating many titles already owned in paper copy. If the reduction ratios used in filming the materials differ greatly from those of the rest of the library's collection, it may be necessary to purchase special viewing equipment before the new set can be used. And without an idea of the number of reels, fiche, or cartridges included in the advertised collection, planning for storage cabinets cannot be done. If information such as the above does not appear in the brochures and catalogs, time-consuming correspondence between library and micropublisher must take place before a purchase request can be approved.

Margaret M. Byrnes is head of the Microform Reading Room, Harlan Hatcher Graduate Library, The University of Michigan. She was a member of the subcommittee that conducted the survey described here. Manuscript received and accepted for publication January 1980.
For all the above reasons and because many of the microform collections being offered today require a considerable portion of a library's budget, it has become especially important that those considering purchase of such materials be as well informed as possible. In response to this need, the RTSD Resources Section Micropublishing Committee appointed an Ad Hoc Subcommittee on the Monitoring of Microform Advertising (SCOMMA) in July 1976. Its function was to encourage publishers of microform materials to observe, where practical, ANSI Standard Z39.76-1975, American National Standard for the Advertising of Micropublications. The standard enumerates elements that should appear in the brochures and catalogs of any organization that offers microforms for sale.

The subcommittee was comprised of chairman E. Dale Cluff and members William Allan, Margaret Byrnes, Jack Pontius, and Patricia Silvernail. Beginning in January 1977, advertising literature was requested from a total of 149 micropublishers. Of these, 74 percent responded. By the end of 1978, the brochures of eighty-four publishers, including all of the major microform producers, had been compared against a checklist derived from the ANSI standard. Evaluative letters were sent to each, drawing the publisher's attention to the existence of the standard and suggesting elements that might be included in future advertising. In a few cases, SCOMMA members merely expressed appreciation for the thoroughness of the information provided in the publisher's literature and emphasized the importance of continuing current practices.

Responses to the evaluations were received from fifty-four micropublishers. Almost without exception, they were appreciative of the subcommittee's efforts. Ninety-three percent of those responding indicated that they either had already begun to incorporate elements of the new standard into their advertising or that they intended to do so in the near future. Typical comments included:

Many, many thanks for your interest and especially for taking so much time to write to us. Because I design and write the promotion and marketing, I am grateful for any feedback that will sell our products better.

I am extremely appreciative of the detailed examination that you made of our work, and I hope that within the year, the advertising will be in conformity with the ANSI standard.

Again, I appreciate receiving your comments. It's always nice to know that somebody out there cares. We'll certainly use your evaluation form in future to check the quality of our advertising information.

Most of the letters sent out by the subcommittee specifically addressed the final element in the ANSI advertising standard, the company's product guarantee and replacement policy. In many cases, no statement as to the company's willingness to replace defective microforms appeared in the promotional literature; many of those that did appear needed elaboration. Knowledge of a company's replacement policy is an especially important element in the decision to purchase a particular microform collection since most libraries do not have the
staff needed to inspect with care large microform shipments upon their arrival and problems are often not discovered until the materials are actually used. Since use might not take place until months after the microforms were received in the library, the publisher's replacement or guarantee policy could have a significant impact on the library's budget.

Twenty-eight percent of the micropublishers who responded to the subcommittee's letters explained or elaborated upon their company's replacement policies. Comments received included the following:

Our guarantee/replacement policy is in the hands of our subscribers. We will replace whatever they feel needs to be replaced.

I think the most honest way to approach the matter of defective fiche is that if there is a reasonable doubt with regard to whose fault it might be, most micropublishers will replace the microfiche free of charge.

I will try to include a policy statement regarding imperfect or damaged-in-shipment microforms in the next revised version of these promotional pieces.

In response to the need expressed by some micropublishers to develop a formal policy statement that could be routinely included in their advertising, the subcommittee drafted sample replacement guidelines and sent them to ten micropublishers for comment. One responded by congratulating the subcommittee for formulating the guidelines and suggesting that they should become a standard for the micropublishing industry.

Based on the volume and positive tone of the responses received from the micropublishers, SCOMMA members rated their project a success. One member expressed confidence that the effort would result in a greater awareness of and compliance with the advertising standard even by companies that did not respond to the letters the subcommittee wrote. All believed that the information provided to micropublishers during the course of the project will ultimately benefit library and publishing communities alike. In terms of furthering communication between the two groups, the subcommittee's efforts were judged to have been extremely worthwhile.

Its function having been accomplished, the Ad Hoc Subcommittee on the Monitoring of Microform Advertising was dissolved in January 1979. At that time, the Micropublishing Committee resolved that a follow-up study be conducted in 1982. Acquisitions librarians and selectors involved with microform materials are encouraged to communicate with the Micropublishing Committee on the quality of the advertising they are currently receiving so that the impact of the subcommittee's efforts can be more accurately assessed. Comments should be sent to the Micropublishing Committee chairman, John Webb, Oregon State Library, Salem, OR 97310.

Reference

Coronado’s Rational Classification System

Robert D. Rodríguez

Francisco de Paula Coronado (1870–1946) developed a classification system for the National Library of Cuba when he became director of the library in 1920. Based on a simple evolutionary model, Coronado’s system, which he called “Rational Classification System,” was entirely derivative and never attracted much interest.

When Francisco de Paula Coronado (1870–1946), essayist, historian, lawyer, and bibliographer, was appointed to the directorship of the nineteen-year-old National Library of Cuba in 1920, the library had no classification system or even catalogs of its holdings. Coronado immediately set about organizing the collection and developing a scheme of classification. At this time, all of Cuba’s public and private libraries, most of them with collections of less than one thousand volumes, employed arbitrary book arrangements grown haphazardly over time and reflecting the idiosyncrasies of their part-time, usually volunteer librarians. Only with the development of Havana’s Municipal Library and the Library of the University of Havana in the 1920s and ’30s and the first formal instruction of librarians in the late ’30s did the professionalization of librarianship in Cuba begin, and, consequently, was attention paid to library cataloging and classification. Coronado’s efforts pioneered this interest in Cuba.

In an essay written in 1936—in fact, his only written documentation of his system—Coronado told of his efforts to conceive a new classification system for the National Library.¹ In order to establish a truly scientific system, wrote Coronado, he diligently studied:

the classifications of Dewey, or Decimal, of Cutter, or Expansive, of Brown, or Subject, and those adopted by the libraries of Congress in Washington, of the British Museum in London, and the National Library in Paris, as well as taking into account the helpful advice found in the better treatises on library

¹ Robert D. Rodríguez is an assistant catalog librarian, Florida International University, Miami. Manuscript received June 1980; accepted for publication July 1980. This article is, after the first two paragraphs, a close paraphrase of Coronado’s explication of his classification system. The terminology and sense intended by Coronado have been retained in order to preserve the historical accuracy of the article and the accuracy of translation.
Coronado’s Rational Classification System was based on a purely evolutionary model, with subject categories identified in the order in which they arose historically or have occurred in human thought or reasoning (hence, “rational”). The first category had to be an exception for works such as dictionaries, encyclopedias, directories, etc. (General Works), and books with no particular subject designation, which Coronado calls polygraphy, in the sense of varied or miscellaneous writings. Successive categories are true subjects.

Since the earth is the fundamental aspect of man’s experience, Coronado begins with studies and descriptions of the earth (Geography and Travel), followed by studies and descriptions of man (Anthropology). Narration of collective and individual experiences of man (History) follows logically. History is a vast field for the collocation of books, and is, therefore, divided into four categories: ancillary fields such as paleography, epigraphy, numismatics, and heraldry (Auxiliary Sciences of History), and then histories of the world, America, and Cuba, the latter two subjects specific to the needs of the National Library.

Man’s first need was to eat and sustain himself (Agriculture), and after satisfying his physical needs man turned to the higher needs born of observation of the world and self (Philosophy). His introspection on the natural led to a consideration of the divine (Religion). Since man is a social being, his first expression in the context of society was through language (Philology), which, refined and developed, yielded writing (Literature). Maintenance of health, preservation of life, and the means for both followed (Medicine), and the need for similar maintenance or preservation of social order led to rules and codes of behavior (Law). Satisfied with basic physical needs, man expressed his creativity in the plastic arts and in music, song, and dance (Fine Arts).

In order to transmit all this accumulated knowledge and wisdom, primitive man had to instruct his progeny (Education); future discoveries or investigations led to science (General Sciences). Modern man applied the principles of science to collective life in its various aspects (Social, Political, and Economic Sciences) and was able to use these principles to transform nature to benefit his own activities (Technology). Of course, science and technology were applied not only to beneficent human needs but also to warfare (Military and Naval Science).

The two parts of the last class of subjects are Bibliography and Library Economy.

All human knowledge is preserved in books, and books transmit knowledge from person to person and, over time, from generation to generation. Books have their science (Bibliography). Finally, books are preserved in libraries, to which those who desire to read them go. There is also a science of libraries which teaches how books are organized, how they are ordered, how they can be more useful (Library Economy).
Thus the scheme Coronado proposed was outlined as follows.

**SUBJECTS**

B  Geography and Travels. Anthropology.
D  Auxiliary Sciences of History.
E  Universal History.
F  History of America.
G  History of Cuba.
H  Agriculture.
J  Philosophy. Religion.
K  Philology.
L  Literature.
M  Medicine.
N  Law.
O  Fine Arts.*
Q  Education.
R  General Sciences.
T  Social, Political, and Economic Sciences.
V  Technology.
Y  Military and Naval Sciences.
Z  Bibliography. Library Economy.

Coronado notes that each of the subjects would be further divided, with subjects indicated by capital letters, classes or categories of subjects by lowercase letters, and subclasses by arabic numbers, the entire combination of assigned letters and numbers being a “signature.” Expansion of specific subjects could be accommodated by adding superscripts to the representative capital letters, e.g., A¹, A², A³; by duplicating letters, e.g., AA, BB, CC; or by combining capitals, e.g., A, AB, AC, AD. Coronado preferred the first and third alternatives, used at the National Library at Paris and the Library of Congress, respectively.

After some subjects, letters are skipped (such as after H for Agriculture), because it was anticipated that the National Library’s holdings of books and materials on Cuba would increase more rapidly in these areas and the reserved letter could be used for classifying works on Cuba.

Coronado’s system is almost entirely derivative, from its simplistic evolutionary model and selection of topics to the general order of the subjects and the use of “signatures.” Yet for the National Library, already the object of public indifference and official neglect, Coronado’s efforts were to have a salutary effect, as well as for Cuban librarianship as a whole. When Jorge Aguayo, assistant director of the Library of the University of Havana, introduced American Library Association cataloging principles and translated Library of Congress subject headings in the late 1930s, and José Antonio Ramos, technical
adviser of the National Library, published his *Manual de Biblioeconomía* (1943) popularizing the Dewey and Universal Decimal Classifications, Cuban library classification was beginning to develop in earnest.

Coronado's system was soon forgotten, never written, or, indeed, used very systematically at his own National Library because of the library's overwhelming problems of finance and staffing. What Coronado wrote of Frederick Perkins' 1882 Rational Classification System in justifying his own appropriation of the name applied, ironically, to his own: "It gained no adherents and was soon forgotten." 

REFERENCES
2. Ibid., p.12.
Margaret Mann Citation, 1980: Peter R. Lewis

The Margaret Mann Citation in Cataloging and Classification for 1980 is awarded to Peter Ronald Lewis in recognition of his substantial contribution to the advancement of a new international standard of cataloging resulting from his leadership in the promotion of the development and full realization of the International Standard Bibliographic Description: General and in the preparation of the Anglo-American Cataloguing Rules, second edition.
Peter R. Lewis

J. C. Downing

The recipient of this year's Margaret Mann award can justifiably be regarded as an admirable representative of British librarianship. He has served in all elements of library practice—public, academic, and special—besides serving an interesting stint as lecturer in library studies at Queen's University of Belfast in Northern Ireland. Throughout his varied career he has shown great interest in the ever-changing nature of library and information services.

The accumulation of interest and experience has resulted in his being offered two positions of considerable significance in the affairs of the library profession in the United Kingdom. Both of these appointments he has accepted at a point when each responsibility was heavily loaded with a variety of problems. Toward the end of 1979 he was appointed director-general of the Bibliographic Services Division of the British Library. And as a long-serving member of its council he was elected honorary treasurer of the (British) Library Association. Each appointment indicates the measure of confidence placed in him by his administrative peers and professional colleagues.

Such positions are not attained, nor enjoyed, without deep thought upon professional matters. The choice of Peter Lewis indicates a recognised ability to give sound advice based on reliable judgement, tempered by an ability to supply results at a preappointed time. The long list of official positions, national and international, and the extensive list of bibliographical references has in no way forced him to operate at a purely superficial level.

To most librarians in North America he will be known as chairperson of the Joint Steering Committee for the Revision of AACR, a position which, despite all subsequent arguments about AACR 2, led to the clearly determined objective of a unified code of rules representing the best American and British practice, while thoroughly reflecting the international developments that have taken place since the publication of AACR 1 in 1967. The preparation of AACR 2 is undeniably an essential element in the integration of cataloguing practice throughout the English-speaking world.

Lewis commenced his professional career in Brighton Public Library, Sussex, in 1948 at the age of twenty-two, having served in H.M. Forces in England, India, and Ceylon (Sri Lanka) during the Second World War. He remained in public libraries, moving to Plymouth and Chester, until 1955. From thence, until 1965, he worked in the Li-

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J. C. Downing is director of Copyright and English Language Services, Bibliographic Services Division, The British Library.
brary of the Board of Trade (now the Department of Industry). Here he came under the influence of one of the most energetic and enthusiastic of British librarians, Ken Mallaber, amongst the first professionally qualified librarians to take charge of a government library.

It was as head of Bibliographic Services at the departmental headquarters library from 1959 to 1965 that he became deeply interested in bibliographic disciplines, becoming a member of the Library Association’s Descriptive Cataloguing Rules Sub-Committee, the work of which culminated in the British text of AACR I. At this time considerable interest in cataloguing matters was being revived in the United Kingdom. From the meetings and seminars held to discuss prospective provisions of AACR I arose the wish to create a Cataloguing and Indexing Group within the Library Association, with Lewis valiantly serving as founding editor of the group’s periodical *Catalogue and Index*.

In 1969 he was appointed chairman of the Library Association’s Cataloguing Rules Committee and in that year he made his first visit to the United States, attending ALA Annual Conference in Atlantic City. He also served as British representative at the International Meeting of Cataloguing Experts in Copenhagen in the same year. It was at this meeting that an international standard bibliographic description was proposed, which later developed into a series of standards related to all forms of documentary record. Lewis’ own interest in audiovisual media led to his leaving the chairmanship of the Cataloguing Rules Sub-Committee in 1973 to become chairman of the association’s Media Cataloguing Rules Committee, which was responsible for producing the so-called LANCET rules.

During this period Lewis moved from his lecturer’s post in Northern Ireland to become librarian of The City University, London, where he remained until 1972 when he was appointed librarian of the University of Sussex. He was now working within almost a stone’s throw of his first library post at Brighton Public Library.

The years since have seen him participating in an ever-expanding range of international, national, and academic library affairs. Besides the succession of visits to North America for meetings of JSCAACR he has visited Greece to advise on academic libraries at the request of the British Council. He has been deeply involved in the affairs of the Library Association, serving on many committees concerned with bibliographic, academic, and general subjects. He is a member of the editorial boards of the *Journal of Documentation* and the *Library Association Record*.

He has served the British Library as an independent advisor on matters of cataloguing, classification, and indexing, as well as an active member of committees and working parties of the Standing Council on National and University Libraries (SCONUL).

All this time he has maintained a regular interest in professional education, first as an examiner in bibliography for the Library Association’s own curriculum, and later as an assessor at several library
schools, before finally taking over the chairmanship of the Board of Fellowship of the Library Association.

In writing this short biography it is difficult to represent comprehensively the many facets of Peter Lewis' professional career. Besides all his interests and activities he contributes to a happy home life in the delightful Sussex village of Hurstpierpoint. Here his wife, June, in addition to attending to the needs of Tim, their son (now attending Cambridge), and Kate, their teenage daughter, works in the local branch of the county library.
Esther J. Piercy Award, 1980: Nancy B. Olson

The 1980 Esther J. Piercy Award is given to Nancy B. Olson in recognition of her outstanding promise for continuing contribution to library technical services.

Joseph Z. Nitecki, Esther J. Piercy Award Jury Chair, 1979–80, with Nancy B. Olson, 1980 Piercy Award recipient.
During the ten years in which Nancy Olson has been in the library profession, her influence has been felt positively and extensively not only in general ways by her colleagues in Minnesota but also in specific ways by technical services librarians throughout the country. Her computer-generated Combined Indexes to the Library of Congress Classification Schedules and her indexes to the Library of Congress Cataloging Service Bulletin have made easier and more efficient the work of technical services librarians. As a national authority on audiovisual cataloging and the use of OCLC and an excellent teacher, Olson has shared her knowledge with hundreds of librarians who have participated in her workshops conducted at Mankato State University and throughout the nation. She has continually given of her time and talent to professional organizations, especially at the state level, and because of her broad interests in many aspects of the library profession and her common-sense judgments, she has assisted the organizations in moving forward and upward.

A native of Iowa, Olson graduated with a B.S. degree from Iowa State University at Ames in 1957. During the ensuing years she taught science and mathematics at intervals in high schools in Iowa and Nebraska, but mainly occupied herself with being a full-time wife and mother. She returned to the academic setting as a graduate student at Mankato State University in Minnesota in 1969 and also served as a graduate assistant in the technical services area of the university's library at that time. Upon receiving the master of science degree with a major in library science in 1970, Olson joined the faculty of the university as a full-time cataloger. She has remained in technical services since, but her change in duties is reflected in the titles she has held at various times: nonprint cataloger, book catalog librarian, systems analyst, and audiovisual cataloger.

Olson's enthusiasm for learning led her to continue formal study in the areas of computer science, systems, and audiovisual materials after receiving the master's degree. Armed with a spirit of innovation and with a knowledge of and pride in solid cataloging principles, Olson readily and easily, but soundly, integrated emerging cataloging concepts with the new technology to produce model processes, indexes, and catalogs. She designed, developed, and produced the first computer-generated book catalogs utilized at Mankato State University. Produced during 1971-73, they were periodical and serial catalogs and subject, title, series, and producer indexes to the institution's motion picture, play, and curriculum guide collections.

In retrospect it is amazing that cataloging librarians had to wait so long.
long for as vital a tool as the *Combined Indexes to the Library of Congress Classification Schedules*. Olson compiled these indexes, which were published in 1975, and she currently is working on supplementary volumes. Her subject and classification number indexes to the MARC data base, 1968–78, are equally valuable as reference tools in technical service departments in many libraries. She compiles, privately publishes, and markets the *Index to the Library of Congress Cataloging Service Bulletin*. She recorded the process for producing the *Index to the Library of Congress Cataloging Service Bulletin* for her thesis in the specialist degree program at Mankato State University. Her specialist degree in library media was awarded in December 1978.

Olson’s competence in indexing and the breadth of her subject knowledge have been recognized by others outside the library field. For example, she indexes the publications of the Red Wing Pottery Collectors and the Great Northern Historical Society and Scale Replica Railway Association. This summer her first textbook will be published. It will concern the cataloging of audiovisual materials according to AACR 2.

Serving as project director for putting OCLC cataloging into operation in the library at Mankato State University, Olson learned early how to create profiles and analyze the work flow of old and new cataloging systems, how to teach others to tag and code (MARC format) bibliographic records for entry into the computer system, how to teach computer terminal usage, and how to assist others in coping with the overwhelming amount of change involved. During this time she also was becoming more and more an authority on audiovisual cataloging and classification. She reviewed several drafts of the chapters pertaining to audiovisual cataloging in the second edition of *Anglo-American Cataloguing Rules*. Not only does she possess vast amounts of technical knowledge and expertise, but she also has the capability of communicating this knowledge to other persons, working on a one-to-one basis, in the workshop setting, or in the academic classroom. She is in great demand as a teacher of cataloging audiovisual materials according to AACR 2 and of cataloging audiovisual materials into the OCLC data base. As a teacher, Olson is able to make the complex appear simple. In Minnesota not only has she conducted many workshops but she also has been highly instrumental in organizing workshops and other continuing education opportunities for librarians to become informed about audiovisual cataloging and the OCLC system.

Olson has channeled her creative energies into professional organizations also, especially at the state level, where she has been active as officer, committee member, and presenter of programs in both the Minnesota Library Association and the state chapter of the American Society for Information Science. In 1977 she was elected by the members of the Minnesota Library Association as vice-president/president-elect. This is noteworthy because no one in the organization is able to recall when a technical services librarian was elected to the highest office of the association. The election can be interpreted as illustrating the high degree of respect and esteem she enjoys among her library
colleagues in the state. During her presidency, which followed the next year, the association produced its first membership directory. Her attention to detail and her belief that every member in the organization is of equal importance were good for the public relations of the association. Especially outstanding during her presidency was the feeling of good will developed with other library professional organizations in the state, such as the Minnesota Educational Media Organization.

We who have known Nancy B. Olson from the beginning of her library career and who have watched with amazement at the unbounding enthusiasm and relentless perseverance with which she has carried to fruition her many ideas for publications and other projects take pride in her having been selected the recipient of the 1980 Esther J. Piercy Award. She has earned the recognition, and she, no doubt, will accept it as the impetus to continue to grow professionally and to make further outstanding contributions to our profession.
RS Publication Award, 1980:
Charles B. Osburn

The Resources Section selected Charles B. Osburn as the recipient of its Publication Award for 1980. Charles B. Osburn, a native of Pittsburgh, holds two graduate degrees in library science, an M.S. from the University of North Carolina at Chapel Hill and a Ph.D. from the University of Michigan. Since 1969 he has held positions of increasing responsibility in academic libraries and was recently appointed to the post of vice-provost for university libraries at the University of Cincinnati. He has had several books and articles published, primarily in the field of French studies. The publication for which he received the award is Academic Research and Library Resources: Changing Patterns in America (Westport, Conn.: Greenwood Pr., 1979).

From left to right: William A. Gosling, RTSD President, 1979–80; Jean B. Hamlin, RTSD Resources Section Chair, 1979–80; Charles B. Osburn, 1980 RTSD Resources Section Publication Award recipient; and Marcia J. Paukake, RTSD Resources Section Publication Award Jury Chair, 1979–80.
From: Hans H. Wellisch, associate professor, College of Library and Information Services, University of Maryland.—Both the heading and the content of Joan E. Mount’s article “Demise of a Classified Catalogue: Victim of Progress?” (Library Resources & Technical Services 23:422–25, Fall 1979) are saddening evidence for the fact that after almost half a century of theoretical writings about the classified catalog its nature and proper mode of working are apparently still widely unknown or misunderstood by North American librarians. What the Laurentian University Library had and abandoned was by no stretch of the imagination a classified catalog, and it seems that rather than being a victim of progress it became one of ineptitude and ignorance, to judge from the author’s report (I have no personal knowledge of the catalog described). A shelllist does not a classified catalog make, nor should alphabetical indexes to a classified list in two languages ever be mixed up into a combined alphabet. This is the idea of a dictionary catalog carried ad absurdum. If in addition the classification scheme used is LC, failure is almost certainly assured, because that classification scheme was never designed to serve as a notational device for a classified catalog, and its very structure makes it highly unsuitable for such a purpose. The Boston University catalog failed for the same reason. This is not a critique of the LC scheme but rather one of people who try to use inappropriate tools for the execution of a task and then blame the tool when the task cannot be accomplished. You cannot expect a screwdriver to work well as a chisel, despite some superficial similarities between the two.

A properly constructed classified catalog is indeed an ideal retrieval mechanism in bi- and multilingual situations, and thousands of such catalogs are in daily use in the U.K., in many European countries, in South Africa, and throughout Asia, where multilingual populations make any other kind of catalog impracticable.

Perhaps the saddest aspect of the article is the author’s frank admission that the users will get the short end of the stick by the kind of progress that has been made. This, however, does not seem to disturb the librarians overly much. The main thing is to run the university library as cheaply as possible, and users be damned. If this be progress we might all be better off without it.

Editor’s note: Letters sent to the editor for publication in this column cannot be acknowledged, answered individually, or returned to the authors. Whenever space is available in an issue, selected letters will be published, with little or no editing, though abridgment may be required. Letters intended for publication should be typed double-spaced.
From: Judith Hopkins, head, Original Cataloging Section, State University of New York at Buffalo.—I read with interest the article by Dennis Reynolds and Connie Capers Thorson, “A Scheme for the temporary classification of materials on foreign law” in the Spring 1980 issue of LRTS (v.24, no.2, pp. 129–134). While agreeing with the authors that the treatment of materials on foreign law for which the appropriate subclasses of LC’s Class K classification are not yet available is a problem, I believe that their proposed solution is more cumbersome than it needs be. Their reason for preferring to put all such material in “K” rather than scattering them in the other schedules (to keep all the material on law together) makes sense although their assumption that such placement will facilitate re-classification after the appropriate subclasses of K become available seems to be a daydream. Very few libraries will be able to afford the effort involved in a complete reclassification.

Assuming that where an item is classed at time of original cataloging is where it will remain, there is another approach that will enable these books classified now to be in close proximity with books on the law of the same jurisdiction after the K subclasses have been published. The Library of Congress has published an outline scheme for Class K which can be found in the Gale cumulation of additions and changes through 1973 (also 1978 cumulation). Libraries can assign the class letters indicated in this outline and a main entry cutter number. Thus, all the works on African law cited in the article could go in KR (Africa) while the ones on Nigerian law could go in KRG (Western Africa).

A further refinement for those libraries that expect to go back and reclassify after the K schedules have been completed is to leave a blank line between the class letter and the main entry cutter. That is the purpose of the zero mentioned by the authors of the article. The zero following the class letters is not printed by OCLC; instead, it triggers the production of the blank line. From the examples cited by the authors of items found in the OCLC data base with local call numbers, it would appear that the libraries that input the Baade, Mensah-Brown, and Elias records are following this approach (although the source of the KT used in the Elias book escapes me). Thus, for the Mensah-Brown book, the call number would print:

KR
M467i

The advantage of this approach is that it will require little or no erasure of call numbers if a library does decide to reclassify as the new schedules become available. Instead, the class numerics can be inserted where the blank line now appears. The only time an erasure will be necessary is when the classification includes a first cutter as part of the class number, thus requiring a second blank line (assuming a library puts each cutter on a separate line).

For those libraries that do not reclassify, the books marked KR plus cutter can stand at the beginning of the African subclass as a chronologically separate collection on the law of the same jurisdiction.

As for the Islamic law the authors referred to, LC intends to put that in KBL. Even if LC does make some changes from the notation shown in the outline, the general order should stay the same, and changes in notation will, it is to be hoped, be not too different from that proposed in the outline.

From: Jack Mills, editor, Bliss Bibliographic Classification. [Abridged]—One can agree with almost everything argued by Miluse Soudek in her article ‘On the classification of psychology in general library classification schemes’ (LRTS
Spring 1980). But why, oh why is there no mention of the new edition of the Bliss Bibliographic Classification? The latter has already published its new Class I Psychology and psychiatry (London, Butterworth, 1978) and virtually every criterion for an adequate classification of psychology posited in the article is fully met by it.

Although the Psychology class in BC1 was decidedly superior to the antiquated offerings of DC and LC (and the contribution to it of Loutitt, whom Soudek quotes extensively, must have had a lot to do with this) it too suffered the central theoretical defect of those other systems in that it lacked a rigorous analytical basis and consequently failed to give clear and comprehensive rules for the consistent placing of complex subjects (let alone provide a specific notation by which to represent them).

BC2, which is a very radical and comprehensive revision indeed, remedies this central defect. As a completely analytico-synthetic classification it meets exactly Austin's criterion, commended by Soudek, in that "...any compound subject, however complex, can be broken down into its separate components, or facets, and these can be reorganized consistently into a standard pattern by reference to a general decision-making model".

The Psychology class, like every other class in BC2, is completely faceted, both conceptually (i.e. the vocabulary is organized comprehensively into categories and sub categories according to strictly observed classificatory principles) and notationally (i.e. all compound classes, reflecting two or more facets or subfacets, can be given a precise classmark). It may be noted also that readers who associate faceted notation with the complexities of UDC or Colon are in for an agreeable surprise when they find that BC2 classmarks are invariably, for the degree of specificity they achieve, briefer that DC or LC classmarks; e.g. Affective psychology IF; Child psychology IM; Social psychology IN; Psychiatry IRG; Group therapy ISW; Schizophrenia IVN. Of course, highly complex subjects get considerably larger classmarks. But these are invariably much briefer than equivalent classmarks in UDC (which can often, but not always, match BC2 in specificity) and incomparably briefer than DC or LC if only because these schemes are quite incapable of such precision. An example from the Introduction to Class I is: "Mother and two-year olds: a study of sex-differentiated aspects of verbal interaction" IMN MMW ORK Q; this classmark represents the full subject exactly, formed by a synthesis of basic classmarks IMN (Two-year olds) IMM W (Mother-child relation) IOR (verbal interaction) IKQ sexes.

Two further substantial advantages may be claimed for BC2. Firstly, its excellent overall order; e.g., Psychology follows Human biology and is followed by Education and Social sciences—a logical and helpful collocation based on Bliss's 'gradation in specialty'. Secondly, it provides a number of carefully designed alternative treatments so that a library or special collection can adapt it to a special viewpoint if need be (e.g., psychoanalysis may be distributed by subordination to the specific psychological problem such as Personality, or collected) . . .

From: Miluse Soudek, associate professor, University Libraries, Northern Illinois University.* [Abridged]—As indicated in his letter to the editor, J. Mills considers the Psychology class in the first edition of the Bliss Bibliographic Classifica-

*The editor invited the author to reply to J. Mills' letter. This is her response. It should be noted that M. Soudek's paper was submitted to this journal in October 1978, while the second edition of Class I was not available in the United States until November 1978.
tion “superior to the antiquated offerings of DC and LC.” I concur with this statement. In my article ... I expressly mentioned that, in comparison to other major classification systems, “only in the Bibliographic Classification of H. E. Bliss are psychological sciences treated as a main class, close to biological, anthropological and social sciences.” (p. 114) I could not, however, specifically mention the new Class I: Psychology, Psychiatry (2d ed., London: Butterworth, 1978) because at the time of my writing it was not yet available.
For the Record

Bylaws of the Resources and Technical Services Division

APPROVED AMENDMENTS

The following amendments were approved at the membership meeting on June 30, 1980. Italics indicate the changes.

Article V. Meetings
Sec. 4. Votes by Mail. [Last paragraph] In the case of a vote by mail the Board of Directors may designate publication of the ballot or questions submitted in the RTSD Newsletter or in the official journal of the Division as the appropriate method of submitting the matter to the members for their determination.

Article XIV. Notice by Mail
Publication of notices in the RTSD Newsletter or in the journal of the Division or the Association shall be considered sufficient to fulfill the requirement of notice by mail.

Preservation of Library Materials Section Bylaws

The bylaws adopted by the Preservation of Library Materials Section were approved at the membership meeting on June 30, 1980, with the editorial changes in Article V, Sec. 4, last paragraph, and Article XIV necessary to make the section bylaws consistent with the amendments to the division bylaws approved at the same meeting. See Library Resources & Technical Services 24:182–86 (Spring 1980) for the text of the bylaws adopted by the section.
Index

Volume 24, 1980

Compiled by Edward Swanson

General Procedures Used in Compiling the Index

The following types of entries are included:

a. authors—of articles, letters, and reviews
b. titles—of articles, books reviewed, and articles about which letters were published
c. subjects of articles

Subject entries for individuals are identified by “(about)”; reviews are identified by “(r)”; letters are identified by “(c).”

Numbers are arranged before alphabetical characters; acronyms are arranged as words.

Paging of Volume 24

<table>
<thead>
<tr>
<th>Pages</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-96</td>
<td>Number 1 (Winter 1980)</td>
</tr>
<tr>
<td>97-192</td>
<td>Number 2 (Spring 1980)</td>
</tr>
<tr>
<td>193-304</td>
<td>Number 3 (Summer 1980)</td>
</tr>
<tr>
<td>305-400</td>
<td>Number 4 (Fall 1980)</td>
</tr>
</tbody>
</table>

“1978 Library Microfilm Rates,” 164–69

A

“AACR I as Applied by Research Libraries to Determine Entry and Headings,” 25–43
Academic Libraries
Gifts and Exchanges, 155–63
Acquisitions Systems
Management, 339–42
“Adapting an Existing Card Catalog to AACR 2,” 209–13
Anglo-American Cataloging Rules, 1st ed., 25–43
Avedon, Don M., 325–28

B

Bibliographic Networks, 226–29
Birmingham, Frank, 378–80
Book Catalogs, 325–60
Braden, Sally, 135–54
Britton, Helen H., 135–54
Broadus, Robert N., 317–24

Brue, J. Michael, 339–42
Brynteson, Susan, 84 (c)
Byrnes, Margaret M., 366–68
Byrum, John D., 25–43

C

Card Catalogs, 209–13
Revisions to Headings, 64–68
Standards, 69–70
Catalog Departments
Organization, 135–54
Catalogers
Education, 343–51
Cataloging. See Descriptive Cataloging; Subject Cataloging
“Cataloging Administrators’ Views on Cataloging Education,” 343–51

Catalogs
Conflicts in Headings, 3–16
See also Book Catalogs; Card Catalogs; COM Catalogs
“Changing from Sears to LC Subject Headings,” 361–63
Charles Ammi Cutter: Library Systematizer 364–65 (r)
Clack, Doris Hargrett, 235–46
Classification, 237–39
Coronado, 369–72
Rider International, 106–13
Special subjects: Law, 129–34; Psychology, 114–28
“Collection Development and Preservation in 1979,” 247–73
Collyer, Mitsuko, 307–16
COM Catalogs, 222–23
“A Computer-Produced Serials Book Catalog with Automatically Generated Indexes,” 352–60
CONSER, 278–79
“Coping with Subject Heading Changes,” 64–68, 294–95 (c)
Coronado, Francisco de Paula, 369–72 (about)
“Coronado’s Rational Classification System,” 369–72
Corporate Authors, 195–208
Custer, Benjamin A., 99–106, 297
Cutter, Charles Ammi, 364–65 (r)

D

Decimal Classification Editorial Policy Committee, 179–80
“Demise of a Classified Catalog” (Fall 1979), 382 (c)
Descriptive Cataloging, 217–34
Dewey, Melvil, 99–106 (about)
Dewey Decimal Classification. See (Classification, Dewey Decimal)
Downing, J. C., 374–76

E

Emory University, 209–13
“The Essentials or Desiderata of the Bibliographic Record as Discovered by Research” (Fall 1979), 295–96 (c)
Exchanges. See Gifts and Exchanges
“An Extended Review of PRECIS” (Spring 1979), 84–86 (c)

F

“False Economy; or, Sabotage at the Catalog!” 69–70, 296 (c)
Ford, Bruce E., 214–16
“Fremont Rider and His International Classification,” 106–13

G

Gates, Barbara A., 17–24
Gifts and Exchanges, 155–63
Glasby, Dorothy J., 274–82

H

Hall, John D., 135–54
Heynen, Jeffrey, 58–63
Hoffman, Herbert H., 296 (c)
Hopkins, Judith, 383 (c)

I

“An In-Depth Collection Evaluation at the University of Manitoba Library,” 329–38
Indexing, 241–42
“Interfacing a Local System with OCLC” (Spring 1979), 84 (c)
“International Micrographics Standards,” 58–63
Iowa State University, 352–60

J

Járny, Imre T., 164–69

K

Kline, Peggy S., 209–13
Knox College, 129–34
Kovacic, Mark, 155–63

L

Law Classification, 129–34
Lewis, Peter R., 373–76 (about)
Library Collections Evaluation, 329–38
Use Studies, 317–24
“Library Microfilm Rates,” 164–69
Library of Congress. Decimal Classification Division, 99–106
Library of Congress Classification. See Classification, Library of Congress
Library of Congress Subject Headings. See Subject Headings, Library of Congress
“The Life and Death(?) of Corporate Authorship,” 195–208
Lotka’s Law, 5–16

M

Magrill, Rose Mary, 44–57, 247–73
“Management Information Aspects of Automated Acquisitions Systems,” 339–42
Microfilm, Vesicular, 325–28
“Microform Advertising,” 366–68
Microforms, 283–90
Advertising, 366–68
Prices, 164–69
Standards, 58–63
“Micrographics, Reprography, and Graphic Communications in 1979,” 283–93
Miksa, Francis L., 364–65 (r)
Mills, Jack, 383–84 (c)
Milstead, Jessica L., 174–78

N
National Library of Cuba, 369–72
National Periodicals Center, 254–55, 280–81
“Natural Versus Inverted Word Order in Subject Headings,” 174–78
“New Attempts to Resolve Old Conflicts,” 214–16
Nisonger, Thomas E., 329–38
Norie, Elisabeth, 69–70

O
OCLC, 135–54, 226–27
Olson, Nancy B., 377–80 (about)
“On the Classification of Psychology in General Library Classification Schemes,” 114–28, 383–85 (c)
Osburn, Charles B., 381 (about)

P
Pagel, Doris, 378–80
Personal Authors, 3–16, 214–16
Pietris, Mary K., 294–95 (c)
“A Plain-Letter Romanization for Russian,” 170–73
Poole, Herbert, 106–13
Potter, William Gray, 3–16
Preservation of Library Materials, 44–57, 262–64
Preston, Gregor A., 64–68
Psychology Classification, 114–28

R
Reprography, 290–91
Research Libraries, 25–43
Research Libraries Group, 227–28, 255
Resources and Technical Services Division

Bylaws: Proposed amendments, 181;
Approved amendments, 181–82, 386
Micropublishing Committee, Ad Hoc Subcommittee on the Monitoring of Microform Advertising, 366–68
Preservation of Library Materials Section: Bylaws, 182–86; Bylaws approved, 386
Reynolds, Dennis, 129–34
Ricard, Richard J., 25–43
Rider, Fremont, 106–13 (about)
Rinehart, Constance, 44–57, 217–34
RLIN, 227–28, 255
Robinson, C. Dere, 84–85 (c)
Rodriguez, Robert D., 369–72
Romanization, 170–73
Russian Language, 170–173
Ryans, Cynthia G., 343–51

S
“Sabotage at the Catalog!” 69–70
Saffady, William, 283–93
Schadlich, Thomas, 361–63
“A Scheme for the Temporary Classification of Materials on Foreign Law,” 129–34, 383 (c)
Scott, Edith, 364–65 (r)
Sears List of Subject Headings, See Subject Headings, Sears
“Selection for Preservation,” 44–57
Serials, 274–82
Catalogs, 352–60
Union Lists, 279–80
Serials Departments, 307–16
“Serials in 1979,” 274–82
Small, Carolyn, 298 (about)
Soudek, Miluse, 114–28, 384–85 (c)
Spalding, C. Sumner, 195–208
Spalding, Helen H., 352–60
State University of New York at Stony Brook, 307–16
Steyskal, George C., 170–73
Studwell, William E., 84 (c)
Subject Cataloging, 235–46
Subject Headings, 239–41
Changes to, 64–68
Sears, 361–63
Word Order, 174–78
“Successful Workshop Planning,” 17–24
Superimposition, 25–43
Swanson, Edward, 387–90

T
Taylor, Marion R., 209–13
Thorson, Connie Capers, 129–34
"Treatment of People and Peoples in Subject Analysis" (Fall 1979), 294 (c)

Unique Serial Identifiers, 277
University of Illinois at Urbana-Champaign, 3-16
University of Manitoba, 329-38
University of Michigan, 44-57
University of Wisconsin-Whitewater, 3-16
"Use of Alternative Class Numbers for Bibliography in the Library of Congress Classification System" (Spring 1979), 84 (c)
"Use Studies of Library Collections," 317-24
"Utilization of Personnel and Bibliographic Resources for Cataloging by OCLC Participating Libraries," 135-54

"The View from the Editor's Chair," 99-106

Weintraub, D. Kathryn, 85-86 (c)
Wellisch, Hans H., 295-96 (c), 382 (c)
"When Names Collide," 3-16
Woods, Frances B., 298
Workshops, 17-24
Wright, Wyllis E., 297 (about)

"Year's Work in Descriptive Cataloging: 1979," 217-34
"Year's Work in Subject Analysis: 1979," 235-46
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American Economic History. William K. Hutchinson the time period from American colonial era to present. 25 Regional Statistics. M. Balachandran. Identifies and describes by subject categories most of the available socioeconomic data sources of interest to marketing economists, regional planners, and business p 257pp.

Urban and Regional Economics. Jean Shackleford. D 40 to aid scholars in both research and teaching at

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