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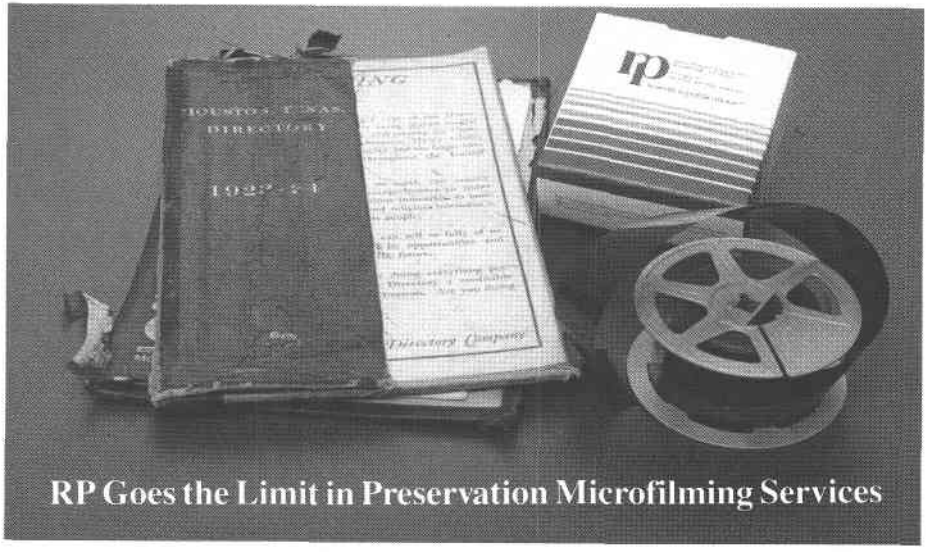

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Universal Bibliographic Control: Its Role in the Availability of Information and Knowledge

Pauline A. Cochrane

With the introduction of high technology into library operations the global bibliographical database to which Dorothy Anderson referred in 1976 is much closer to a reality, making the need for universal bibliographic control (UBC) even more essential. After a review of the major steps taken toward UBC in the past twenty years, the paper is a critique of some of the shortfalls in the UNESCO/IFLA program. For example, we still do not exchange authority files easily or provide for universal subject access. The developing countries, which could benefit most from UBC, are still removed from it because of a lack of resources and reliable telecommunications and the slow introduction of technology. Advances such as electronic publishing are put in context in order to suggest an expanded role for UBC in the future.

During the recent past, from 1961 to 1989, much work has been undertaken to develop international bibliographic standards and standard practices. One author, Frans Heymans,[1] has described these efforts as having achieved more results in the field of international bibliographic control than in the twenty centuries before.

On the basis of these efforts a number of international and regional information programs and systems have been established. Also, national bibliographic developments worldwide are now planned with an awareness of the international context. We now are using worldwide a unique numbering system for monographs and serials, an international standard for entries for bibliographic descriptions, for different types of publications, and for abbreviations used. We have international agreements on the transliteration of nonroman alphabets, for the structure of machine-readable records, and for an international exchange format.

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Catalog codes such as the *Anglo-American Cataloguing Rules,* 2d edition, and classification schemes such as the *Dewey Decimal Classification* have been revised to make them more useful to librarians in many countries beyond the English-speaking world for whom they were originally designed. The rules and schemes have recognized the cataloging requirements of libraries in countries with differing publishing traditions, with languages that follow different grammatical structures, and where patterns of name usage are not as direct and consistent as the Anglo-American.[2] *AACR2* translations completed or planned include almost every language spoken in the Caribbean and Latin America (French, Portuguese, and Spanish, but not Dutch as of 1985), and the incorporation of the *International Standard for Bibliographic Description (ISBD)* makes for greater understanding of each others' records regardless of language. According to Dorothy Anderson, "Cataloging can now be said to be an international effort with each country contributing to build a global database."[3]

Do all these efforts add up to universal bibliographic control (UBC) or do we still have much to do before that goal is reached? Frans Heymans in 1982 said no, we have not yet reached universal bibliographic control, because "practice shows that not all adaptations have resulted in more uniformity . . . [and in our] search for a smooth *technical* interchangeability of bibliographic information . . . [we have forgotten that] success or failure fully depends on the usability, the understandability of the message by human beings."[4]

Now, years after Heyman's article it does seem right to consider "the role of UBC in the availability of information and knowledge." There is no doubt that much has been done toward the goal of UBC, but we must examine how much more we have to do. Two important papers are those by Wilma Primus, who wrote on the Caribbean Information System for Economic and Social Development Planning (CARISPLAN) in 1982, and Modeste and Shepherd, who wrote on the UNESCO bibliographic efforts in the Caribbean in 1986.[5,6] Those papers document a giant effort toward "regional bibliographic control," which shows how much can be done in just three years, let alone twenty. This Caribbean effort shows *why* bibliographic standards, cooperation, and coordination are needed and toward what they can lead. In that way it shows what UBC may help to achieve on a global basis if the efforts begun a quarter of a century ago are put in a new context.

With the introduction of high technology into library operations we have truly begun to build the global bibliographical database to which Dorothy Anderson referred in 1976. The bibliographic records that used to be only printed in various countries as national bibliographies or in volumes representing the publication of works in a given language or on a particular subject now have many other purposes. Because these records are aggregated to form national and international databases, library managers can now decide to acquire either the volumes or the *access* to a bibliographic utility like OCLC or Dialog that contains these records. In this way a library's users will have access to at least the recent publications from almost any country. Now the records for every source can be accumulated and accessed for various purposes by people almost anywhere in the world.

OCLC and Dialog are the most global of all the bibliographic utilities, but they are not the only ones. Efforts like CARISPLAN in the Caribbean should be seen as part of this "global bibliographic database." CARISPLAN in fact is a better example because its users get many specialized services, which ensure that information, not just bibliographic references, is available on demand. This is the necessary final ingredient of UBC if we are to achieve our ultimate goal of meeting users' needs for information and knowledge.

UBC has always been a goal of modern librarianship. Making it a program of UNESCO/IFLA was the ingenious idea of a few librarians who achieved so much by bringing a group together to achieve that goal. The 1974 publication *Universal Bibliographic Control* by Dorothy Anderson[7] has the subtitle "A long-term policy—a plan for action." The idea of *shared cataloging* has now reached a meaning beyond its first context when the Library of Congress introduced it at the IFLA General Council in 1966, and the concept of *universal bibliographic control* has gone beyond its original scope with the introduction of another IFLA program, universal availability of publications (UAP). A concomitant of UBC, UAP is a formal effort to improve access to publications through interlending both within and between countries.[8]

The original basis of the UBC concept was simple:

1. the practical common sense of making use of and exchanging worldwide bibliographic records created nationally, but based on internationally accepted bibliographic standards and cataloging practices; and
2. the recognition that the catalogers in any one country are best able to describe the publications of their country.

Over time the concept of UBC was expanded to include the availability of bibliographic information in computer-based systems that can be linked via telecommunications.

Belonging to any international information system or abstracting and indexing service will require adjustments for many who feel some of their local concerns are being ignored. Others are concerned lest local or regional bibliographic systems become too tailor-made and do not show enough regard for international services. Obviously there has had to be constant vigilance to ensure that the interrelationship of national and international needs and demands is recognized. Stephen Davis, Frans Heymans, and Bjorn Tell are such vigilant people.

Heymans in 1982 described the dilemma of librarians who did not want to deny national traditions and characteristics for the sake of international uniformity.[9] He suggested ways around this that could now be implemented given the ability of the new technological devices. His call for a "worldwide exchange of authority files" is beginning to be answered and maybe his International Standard Control Form (ISCF) should be reconsidered. As he said, via ISCF there could be direct access to the national form of a heading, but the international control heading could always be added when needed.

Stephen Davis makes a plea for all of us engaged in UBC efforts to consider the special needs of rare books and manuscripts librarians and how

the new CD-ROM technology can change the way we look at some of our efforts at UBC.[10]

Bjorn Tell, in a 1988 presentation to the International Federation for Documentation/Education and Training Committee in Finland,[11] reported on his efforts to teach cataloging and database production in Nicaragua. He argues that minimum cataloging should be the first step in order to get books out to the public, and later, with a computer software program like *ISIS* (supplied to developing countries by the International Development Research Centre in Canada), these input records could be augmented following a step-by-step procedure to make the records more comprehensive and usable in national and international bibliographies. He even proposes the introduction of *numerus currens* as shelfmarks, with Dewey and Cutter numbers coming later if needed for use in classified catalogs. He beseeches FID, IFLA, and UNESCO to "clarify the obstacles blocking the road to a development towards a descriptive cataloging more adapted to computerization," and he applauds researchers who are working to devise a catalog based on the use of hypertext techniques instead of expert systems based on *AACR2* as a knowledge base.

In my opinion their suggestions can be followed and we can still be working toward UBC.

With such discussions continuing the goal of UBC might seem to be beyond our reach, but it is good to remember that the UBC program begun more than twenty-five years ago is still going on even though a whole generation of people in the profession has come and gone. There are still reports of work within the program taking place. Papers presented at the annual conferences of IFLA still report progress "in the context of UBC" such as retrospective national bibliographies, third world national bibliography publications, UNIMARC, union lists of serials, and Cataloging-in-Publication (CIP).

The challenge today, according to Ross Bourne, "is for the programme to operate efficiently within the constraints of staff and budgetary resources, whilst remaining responsive to external developments, such as the growing significance of automation in library planning and the greater potential for cooperation."[12]

So UBC as a goal as well as an IFLA/UNESCO program is ongoing, but people are reminding us to remember that cataloging and automation and the bibliographic databases produced are only tools or a *channel* and not ends in themselves. When we say that the role of UBC efforts is to make information more readily accessible to any who are in need of it, we must be sure that all UBC efforts are significantly improving the availability of information.

UBC as a program is not to demonstrate *control* over bibliographic information but to *make information accessible*. Bibliographic retrieval systems can now be linked to optical retrieval systems and full-text databases. Electronic publishing is more and more evident. Within the context of such developments all our efforts at UBC should help provide direct and immediate access to images of the original information.

The First International Conference on *Bibliographic Access in Europe*[13] took place at the University of Bath in England on September 14–17, 1989.

UBC was not explicitly on the program, but there was no way the conference could be held without it. The major topics for the conference brochure were centralized databases, bibliographic standards, networking, and public interactive library catalogs. Not one of these topics could have been contemplated without the work that began as UBC twenty-five years ago.

Atherton, as early as 1966, and Sable, twenty years later, have recommended that we think of such reference tools as abstracting services and directories as part of the domain of a universal bibliographical database.[14,15] How these databases are formatted and designed will affect how easily they can be merged with the bibliographic databases we have had as our primary focus in UBC efforts. Sable, in his 1986 article, said it very well when he wrote: "Combining fine directories, international in scope, with bibliographical information for monographic, periodical, and audiovisual sources provides the example par excellence of what is required . . . for those . . . desiring to learn . . . to gain access to information."

It is encouraging to report that such combined access is already in existence in the field of toxicology. An announcement from the Specialized Information Services Division of the National Library of Medicine in Washington reports that via TOXNET users can now gain access to DBIR, the Directory of Biotechnology Information Resources. These same users, of course, have access to MEDLINE, CATLINE, AVLINE, AIDSLINE, and DOCLINE, to mention only a few of the files available in NLM's "global medical bibliographic database."

In an article judged among the "Best of the 1986 ALA/RTSD Conference," Karen Horney of Northwestern University wrote about library services in the information era.[16] She attempted some predictions about the library of the future. What she had to say may have been influenced by the rapid changes she has seen in her own library since 1971 when NOTIS was first implemented, but it rings true because it puts such efforts as UBC in perspective with the newest developments and trends in information handling.

> The book as an artifact will no longer be limited to [its] traditional [form].
>
> Cataloging will still be an intellectual process, but it may not take place entirely within libraries.
>
> Many resources will be *accessed but not owned* by libraries.
>
> The journal as we know it will cease to exist and be replaced by electronic article access.
>
> Indexing and abstracting services are likely to assume ever greater importance.
>
> The fruition of current efforts in retrospective conversion and initiatives to add materials not previously analyzed will allow online catalog access to the full range of library collections, nationwide and beyond, regardless of the format in which the text resides. If the shifting economics of telecommunication and centralized database maintenance costs in comparison with compact disk production, supply, and storage expenses permit, cooperatively created bibliographic files will be readily accessible either via electronic gateways from local area networks or by using CD-ROM types of equipment maintained in-house.

I interpret her message to mean that universal bibliographic control is within our grasp. The availability of new technological applications and our determination to use them has made it possible to envision biblio-

graphic databases that are cooperatively produced and used by many libraries in many countries. The work begun before the 1961 IFLA Conference on Cataloging Principles and continued in the IFLA UBC Office in the British Library since 1974 has helped the library profession ready itself for the opportunity to use the new technology to good advantage for the common good. During this long period of trial and error at library automation at the local level we have still come out ahead on the international or universal level. This should be cause for joy in our professional circles, but are we correct in painting such a rosy picture when we know there is still so much to do in the context of electronic publishing? I think the answer is a qualified yes, but there are some serious problems we must be willing to face.

This expanded view of the meaning of UBC will create some problems for the developed countries and even more problems for the developing ones. As Dorothy Anderson described in her 1986 article,[17] there must be concern about shortages of resources to accomplish the required tasks. Without technical equipment and its maintenance, without persons who are trained, and without a basic and reliable infrastructure of communication, some countries that contribute to efforts at UBC may not be able to use the global database made by such efforts. Cannot these shortages be seen as international problems?

When joint retrospective conversion projects are undertaken, such as the Stanford Project (recently announced for Latin American materials),[18] should not the plan of work include not only cooperating libraries in the United States (in this case University of California–Berkeley, University of Florida, Indiana University, University of Texas at Austin, and Yale University) but also some Caribbean or Latin American academic research libraries? After all, when the 56,000 new records and the enhancement of an additional 85,000 records already in the OCLC and RLIN databases are available, all libraries on these systems will benefit. The Stanford project leaders report that this effort will result in a valuable asset for scholarship throughout Central and South America, "where library holdings and access thereto is often uncertain." If that is true, then by their very effort these U.S. librarians should be trying to help Central and South American librarians with their efforts at bibliographic control. Then the availability of information from these regions as well as in these regions will improve. It is disappointing that no library from the Caribbean is part of this project.

There is no doubt that electronic publishing will change what we all do in our future UBC efforts. Horny points out that:

1. The standard monographic materials will continue to be published in the eminently convenient traditional book format, but shorter documents and esoteric texts *are likely to be maintained in electronic databases with on-demand printing of hard copy*. This development alone will mean significant changes in library services because it means that many resources will be *accessed but not owned by libraries*. This will change our "library" catalogs into "universal bibliographic access" catalogs.
2. The journal as we know it will cease to exist and be replaced by electronic article access. The indexing and abstracting services are likely

> to assume ever greater importance because they will be the direct pathway to the full-text journal article. Online access to such services is certain to be made available directly to users of a particular library's computer-based catalog.[19]

Try to imagine what these developments will mean to serials departments and to reference departments, not to mention collection development specialists. If these predictions are correct, there will be options we will be considering other than ownership, and there will be UBC-trained catalogers in publishing houses instead of only in libraries. Arrangements like those in CARISPLAN may become prototypes for what we must do in all of our libraries to make knowledge and information available.

By the turn of the century we may see our work at description more and more in the hands of the electronic publishers and their catalogers, who will provide both the description and the full-text online. In individual libraries we will need more information professionals who understand the organization of knowledge and who can move about easily from database to database, from one country's national bibliography to another, from one international information system to another, searching out information that would no longer be on our shelves but that might be more accessible—if we can find it. That presents a new challenge and commits us to working within an expanded meaning of the concept of UBC. If that concept and program cannot be stretched any further, then perhaps we need to be working with the concept of *universal bibliographic access*, along the lines of the conference in Europe. There, besides the topics of networking, UNIMARC, cataloging codes and the coordination of authority control, subject access and language problems, information retrieval techniques, and performance evaluation were also discussed. That is a very encouraging sign.

In 1983, in an article entitled "Paradigm Shift in Library Science,"[20] Cochrane wrote:

> The challenge for the library profession now is *not* how to convert card catalogs to online catalogs, but how to convert *unifunctional* catalogs into *multifunctional* catalogs where known-item and topical-subject searches can both be successfully completed.

Today we know that the multifunctional catalogs we produce should also include access to bibliographic information from other libraries, various abstracting and indexing services, directories, and even access to the full text. The application of CD-ROM technology to various library/information services is now on the horizon. That and the full potential of electronic publishing efforts will have an impact on our catalogs. We must begin to think of international efforts to improve subject access via our bibliographic tools such as machine-readable catalogs.

This is not an unexpected next step in the UBC program. We have been implored, from as long ago as 1979, to begin an effort that we could call, for want of a better name, universal subject access (USA).[21] Like the concept of *shared cataloging* before it, I hope this does not connote a form of American imperialism and therefore control, but instead represent a concept for a bibliographic enterprise that will bring subject access to the consciousness of librarians worldwide.[22]

By universal subject access I mean an appropriate *access system* to all library and information collections, thereby making possible the accessibility of information by users anywhere. Just as CARISPLAN uses the OECD Microthesaurus, other international or global databases will have to adopt some ways of vocabulary switching.

At the core of such an effort there could be a responsible agency, like the UBC/IFLA office in London, which would coordinate efforts to produce a *language system*, going beyond DDC, LCC, LCSH, UNBIS, OECD or any other index language. All the specific index languages would be entry points into USA network, but there would be additional switching mechanisms to interpret and translate across specific languages of the various databases and the language of users. Maybe the idea should be resurrected after ten years and some new thinking applied to the concept. Given the show of interest in Europe, it may happen there, or here in the Caribbean, before it happens in the United States.

Such a concept is most assuredly missing from the concept of UBC, if we go beyond the ordering of entries on a shelf or in a national bibliography. Gateway systems are already available between systems and they could help us begin to live up to our goals. If we expand the concept of UBC to include universal subject access we ensure that information and knowledge will be available to all.

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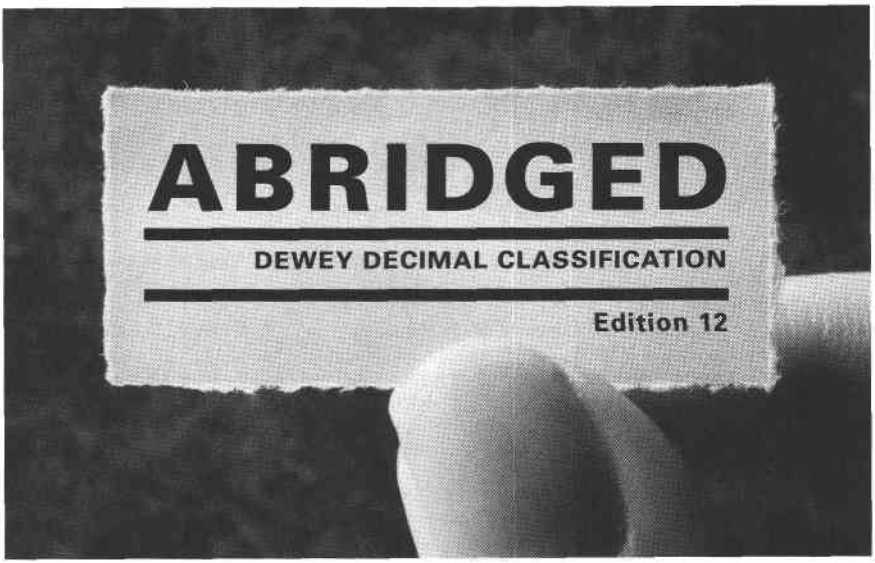

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Lives of Noisy Desperation: A Year's Work in Collection Development, 1989

Karen A. Schmidt

The collection development literature of 1989 shows how well the profession is coping with declining budgets, spiraling costs, and new technologies. A selective number of articles and books on the following topics are reviewed: general works on collection development; financing; serials; new technology; collection evaluation and measurement; automation; cooperative arrangements; selection and review; preservation, storage and collection size; vendors and acquisitions; and education and training. The literature suggests that librarians in charge of collection development must continue to deal with financial burdens and an expanding list of demands for new materials in all formats.

"The mass of men," wrote Henry Thoreau, "lead lives of quiet desperation."[1] For those involved in collection development and management activities these days, there is little time for the luxury of quiet. Collection managers have fallen on desperate times, their work a reflection of a dizzying display of declining budgets, spiraling costs, and new technologies. The collection development literature of 1989 shows how well the profession is coping with these trends after the whiplash of 1987 and 1988.

Included in this literature review are a selective number of articles and books produced during 1989, listed under a dozen topics of general concern to the collection manager. Two topics, preservation and matters relating to acquisitions as an adjunct to collection development, are touched on only briefly. A number of substantial works appeared this year, including full-length texts and a reprise of important pieces published years before. The range of publications shows the growth of this sector of librarianship and the positive responses to the problems facing our collections.

General Works

Two important texts appeared, providing comprehensive overviews of the work of collection management. Wortman's *Collection Management: Background and Principles* treats all aspects of collection management in a

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way that is beneficial to both the student and the practitioner. Shoemaker's *Collection Management: Current Issues* is a collection of in-depth essays that document the state of the art of collection development as we understand it today. A shorter treatment of this general area is found in the Association of College & Research Libraries' CLIP note *Collection Development Policies for College Libraries*, which details collection policies for college libraries.

The need to shift our focus from documents to content and from collections to individuals is the focus of Drake's article, while Schwartz provides an extensive review of the decision-making process of book selection. Atkinson puts the role of collection development in a historical setting to develop a systemized approach to the problems in the field, similar in some respects to the arguments posed by Buckland, who examines the scope of collection development and suggests that we begin regarding collection development much as we regard file organization with a computer system. This approach allows the collection development librarian to see how files are used, as opposed to looking solely at the substance of the file. Bucknall discusses the problems and promises of organizing collection activities in one centralized area as opposed to a coordinated but decentralized approach. The often-unspoken politics of collection development are the theme of Bullard's editorial, in which he discusses the political overtones of writing a collection policy statement and engaging teaching faculty and administrators in the process. An overview of "collection development in action" is provided in the lead essay by Fiste from a day-long workshop at the University of Toledo.

Atkinson provides a scholarly essay on referential abstraction in bibliography and the ways in which bibliography is used in library selection. He notes that bibliography is one of the most ancient but least studied of the branches of scholarship. A 1989 reprint of Fremont Rider's 1944 essay, "The Future of the Research Library," serves the valuable function of making us look back on past concerns. Rider's promotion of the use of microfilm and microcards as a way of producing savings in space and money echo a familiar and present theme with new technology.

FINANCES

The impact of too few dollars for too many needs is at the heart of the noisy desperation of our collection managers. "Will the serials giant eat us?" asked Dowd, who stresses the dichotomy between the archival and service roles of the research library and the resultant tensions regarding where to spend money. In the same collection of essays for the *Journal of Library Administration*, Shaughnessy discusses how rising materials costs have led to a crisis in library management, and Schrift offers a vendor's perspective on how libraries can cope with dwindling funds. Cargill provides an analysis of how budget problems can affect the entire technical operation of a library. Niles' description of the political side of budget allocations is a refreshing look at this issue. Lynden notes the somewhat positive aspects of budgetary constraints, which force libraries to review seriously their collection and selection policies and produce librarians who are informed consumer advocates.

Flexible funding as a coping mechanism is advocated by Ring. Reporting the results of a survey, Budd and Adams discuss how allocation formulas are implemented in libraries, noting that relatively few variables are used but that each library setting weights each variable differently. Budgets in school media centers are the topic of an article by Blake. Allocation procedures at the University of Akron are described by Hibbs. Johnson describes how the terminology a library uses to describe its materials budget conveys information about the collection to the outside.

SERIALS

Serials are the source of much of the financial crunch that libraries experience. The literature of 1987 and 1988 is replete with numerous studies about the cause and effect of serial pricing policies. The furor abated during 1989 but the frustrations remained. In what began as a typing error, the title of Astle's article sums up the problem: "The Scholarly Journal: Whence or Wither." A similar essay that gives a long-range overview of the serials problem is offered by Hamaker. Using figures from a 1985 study, Moline takes a quantitative look at how publication costs differ among disciplines. Journal cancellation problems are outlined by Sapp and Watson, who discuss a model for faculty awareness and involvement. Experiences at the University of Arizona for a three-year cancellation project form the basis for discussion by Tallman and Leach, in which the problem of establishing a balance between monograph and serial expenditures is addressed.

Heitshu and Leach discuss the full range of problems in developing serial collections. Of interest to this literature review is their presentation of economic problems, including the Gordon and Breach controversy. Problems associated with serial costs most often affect the science collections, with resultant effects on the rest of the collection according to Yocum. She notes that the very pluralism of the university, which is expected to be represented in the library, creates tension within collection development.

NEW TECHNOLOGY

Another major source of frustration in the past few years has been the introduction of new technology. CD-ROM access to the literature of many disciplines has created a demand that many library budgets cannot meet, while electronic publications are requiring a new approach to collection development and management techniques. In addition, these products are significantly more expensive than their print counterparts. Alley characterizes the advent of the CD-ROM as having "the potential for being one of the biggest budget drainers to hit libraries." In two different pieces, Johnson notes the burgeoning acquisitions problems found with CD-ROM products (Johnson A), and discusses how machine-readable data files affect not only collection development policies but also library policies for processing, circulation, and maintenance (Johnson B). In an article that also provides an excellent bibliography on electronic publishing, Robinson likens managing these changes to a juggling act. Welsch promotes the concept of the selector's workstation as a method of making selection decisions in an online, technologically advanced environment.

Reed-Scott, and McKeehan, Smith, and Boggan provide discussions of the effect of emerging technologies on collection development policies. Intner notes the tensions of the access-versus-ownership quandary (Intner A) and enumerates the important considerations to be made in selecting software (Intner B). Demas suggests ways in which new formats can be integrated into the regular work flow and collections of the library. He outlines five steps for mainstreaming electronic formats and recommends libraries work out a combination of the most cost-effective mix of electronic and print formats.

Collection Evaluation and Measurement

A compact and useful pamphlet from ALA, *Guide to the Evaluation of Library Collections*, is a good introduction to the methodology of collection evaluation. Edited by Lockett, this guide also includes a detailed bibliography that leads readers into the literature of the field. Hyman looks at methodology for evaluation that is user based, while Stielow and Tibbo offer a methodology that is stratified by type of material collected. They argue for a more holistic approach by collection development librarians and discuss the usefulness of tools such as the RLG conspectus. The problems associated with evaluation achieved through list checking are presented by Lundin. Bridges recounts the difficulties of relying on journal reviews for evaluation and suggests that publisher-based and other approval plans are rational approaches to obtaining desirable material without delays.

The North American Collections Inventory Project (NCIP), an ARL/RLG joint project to describe research library collections, is an online inventory in shelflist order of library holdings. Farrell and Reed-Scott, and MacEwan provide descriptions of this encompassing and ambitious project. Dannelly describes the National Shelflist Count project, which uses some 600 LC subject areas to provide a numeric description of collection strengths and weaknesses. Schmidt uses the RLG conspectus as a backdrop for a discussion of the difficulties in evaluating library collections with an eye toward cooperation. In another reprise, this time from 1965, Clapp and Jordan challenge the doctrine that academic library adequacy cannot be measured by the number of books in the collection. Their work suggests new formulas for evaluation that can be as thought-provoking today as they were twenty-five years ago.

The procedures for developing a collection development policy are outlined by Dienes. Hoolihan provides an anlysis of collection development policies for a specialized collection, medical rare books. Australian libraries have begun using the RLG conspectus with good success, as reported by Hibbs.

Automation

Virtually all aspects of library management have been automated, leaving the collection manager with reams of data on acquisition, circulation, duplication, and budgets from his/her own library as well as from others. While the data generated from these automated systems are useful, Lynden

rejects out of hand the assumption that collection development can be done by automation. The heart of collection development, Lynden notes, is an intellectual process simply aided, not duplicated, by automation. Smith uses automation to enhance bibliography in the humanities, explaining that use of databases provides the means by which one can approach the complete bibliography. Soltesz describes the use of automated collection development data in the public library, while Allison's article provides a broad overview of collection management in an automated library.

Interlibrary loan records are a useful means of identifying potential collection needs, as described by Bartolo. *Books for College Libraries*, available in machine-readable form, can be the basis for analyzing a collection easily, particularly if library holdings are in machine-readable form.

Cooperative Arrangements

Automation has been instrumental in helping libraries adapt to changing situations, not the least of which is the need for and desirability of cooperating among ourselves. Mosher notes that libraries have become less collection driven and more client centered, due in part to the recent strides in cooperative collection development. Several models for cooperation have been proposed, including Hamilton and Feis' description of a cooperative collection policy between libraries in Oregon, Ionesco's presentation of a regional model, and Pettos' and Pettos and Bates' reviews of cooperative projects in northern California. Downes promotes the need for partnerships among libraries, publishers, scholars, and funding agencies. Because of the changing nature of the library, it is of paramount importance to work toward becoming a fully automated research library and to accept and work with change to head off obsolescence. Specialized cooperation for map collections is the subject of an essay by Cruse.

Cooperative collection development for monographs is a frequent occurrence, but serial collection cooperation remains for many libraries an unfulfilled wish. Where serials are involved, many libraries have procedures that get in the way of cooperative ventures among libraries: journals are not circulated for any length of time because of the timeliness of the content, and so cooperation in this area is often stymied. Sartori describes successful cooperative serials projects, in which purchases tend to be grouped by the size and specialization of each library. She notes that certain agreements have to be agreed upon and maintained if serial collection cooperation is to work, including a good communication and document delivery system, waiver of interlibrary loan fees, and a willingness on the part of each library to look beyond its own concerns.

Lest we think cooperation with its boons and banes is limited to North America, a discussion by Cameron of interlibrary cooperation in Australia provides an interesting parallel to libraries in this part of the world. She notes that accountability and flexibility are important to each institution and are the keystone to success of cooperative arrangements.

Selection and Review

Selection is a subset of collection development that is part art and part science. Reviews play an important role in selection, as do approval plans

in many libraries. Blake provides a scholarly look at how reviews affect selection, as does Parker, who notes that scholarly journals are a major source for selection in large libraries, despite drawbacks in timeliness. As noted earlier, Schwartz looks at the process through which librarians select books, likening the process to garbage-can decision making, a process that is characterized by open-ended goals, problematic preferences, hazy techniques, and poor feedback. Kaatrude, Carpenter, and Childress and Gibbs look at the interplay between selection and approval plans. Hardin explores the usefulness of deposit accounts and approval plans in budgetary planning for mid-sized academic libraries.

Collection development and selection for reference collections is the topic of an essay by Hattendorf, who looks at a frequently ignored area of collection development. Hattendorf presents the notion of Olson's "professional blind spots" in selection, including misinterpreting patron needs, exercising personal biases, and confusing the role of the collection development librarian. A survey by Okpokwasili and Bundy provides information about selection policies in agriculture libraries in the United States. Branin discusses information policies for collection and selection in libraries of all sizes, as libraries' focuses shift from collections to information access. The two cultures of humanities and sciences each define their own selection criteria, as described by Budd. Each culture has its own body of literature, and each body of literature may take different forms, thereby creating different demands from selection. Agnew provides data on how use patterns can affect collection policies, using the experience of Georgia State University as the backdrop. An entire issue of *Science & Technology Libraries* is devoted to collection management in science libraries.

Preservation, Storage and Collection Size

The body of literature on preservation is a growing and vital part of the professional record. This review includes only a very small portion of the literature available on this important topic. In a review of collection and preservation issues common to many libraries, Byrnes addresses the problems of replacement purchase, resource sharing, new format acquisition, and budgetary costs of preservation. Confirming the difficulties of preserving a working research collection, a study from the University of Illinois showed only 29 percent of the collection in good condition. An important part of this study is the replicated methodology.

Cooper produces a cost methodology to decide on alternative collection storage facilities. The method looks at type of access and shelving to determine needs. Dowd's "Alexandria Revisited" addresses space and collection growth. She notes the dichotomy between the archival and service roles of research libraries and discusses the impact of storage alternatives such as compact shelving.

Deacquisition is a little-explored area of collection management. Kovacs handles both science and technology collections and general collections, providing guidelines for knowledgeable weeding and citing tools to support the weeding effort. Both methodology and labor costs for dis-

banding a collection are the topics of an article by Rose and Heron. They describe the method for integrating an advertising materials collection into the general collection, noting low processing costs.

VENDORS/ACQUISITIONS

Library vendors play an ever-increasing role in working with librarians on collection management. Many book and serial vendors are now providing budget forecasting as part of their regular service, producing many different kinds of collection management reports, and are beginning to branch out into regular publications addressing problems in the publishing industry.

Duchin outlines the types of support services available from vendors, particularly during times of budgetary constraint. He notes that vendors have been assuming the tasks of library processing bit by bit. As noted previously, Schrift provides a vendor perspective on how libraries can cope with decreased materials budgets. He advocates a formula approach to collection balance that could put libraries in the position of dictating requirements to publishers instead of allowing publishers to make all the decisions.

Many acquisitions topics of interest to collection development librarians are discussed annually at the College of Charleston conference. A detailed review of the presentations for 1989 is found in *Library Acquisitions: Practice & Theory*, volume 13, number 2. With the overall theme of "Questioning Assumptions," the conference addressed many publisher and vendor issues that impinge on collection management activities.

EDUCATION AND TRAINING

Besides the two comprehensive texts by Shoemaker and Wortman published during 1989, a few articles were published concerning training for collection development. A paper presented by Judith Paquette at the ACRL conference in Cincinnati in 1989, and reported upon by Julie Ann McDaniel, describes an in-house training program for new selectors. Frank and Kollen look at the skills needed in science and engineering libraries and ask if humanities-trained librarians could fit easily into the collection development and reference areas of a science library. They conclude that science credentials are not an essential criterion for humanists to perform well in a science library, if some in-house training is provided.

Finally, Tucker discusses an ignored, but important, component of collection development librarians' daily lives—time management. Among the pieces of practical advice, Tucker admonishes collection development librarians to stop saying the following: "Oh, Okay"; "Oh, all right"; "That's OK"—good advice to the profession as a whole.

CONCLUSION

A look at the literature of 1989 suggests that collection development seems to have settled in for the long haul in dealing with financial burdens and an expanding list of demands for new materials in all formats. It is encouraging to find that the literature is addressing our difficulties with objective data and creative thinking. The problems facing libraries and

collection development librarians are cause for noisy desperation. Far better we spread the word than sink in quiet desperation.

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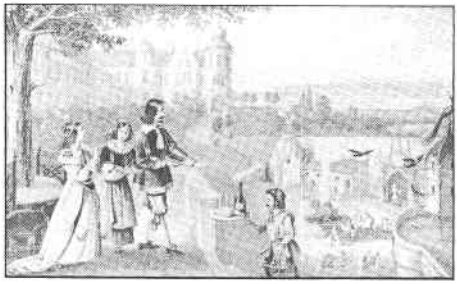

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Preservation Photocopying of Bound Volumes: An Increasingly Viable Option

Gloria J. Orr

Four new, commercially available book copiers significantly reduce damage to book bindings incurred with traditional photocopiers and now offer an alternative to preserving works that are rare, fragile, tightly bound, or too brittle to handle. This paper discusses the new photocopiers and major equipment factors—specifically paper, toner, ultraviolet light, and machine design—that should be considered in preservation photocopying. The systems analysis approach used to identify needs, collect data, and evaluate the photocopiers available should help identify a book copier that best serves particular needs and fits specific budgets.

In her comprehensive work *Preservation Microfilming*, Nancy Gwinn identifies photocopy replacement, on acid-free paper, as one of the options available for preserving bound volumes.[1] Hedi Kyle, in her preservation manual, notes that photocopying's most important advantage is that books are made more accessible to users "without exposing the originals to damage from overuse, vandalism, or theft."[2] Unfortunately, the photocopying process, as with preservation microfilming, can be extremely damaging and has not been a viable option for reproducing and retaining rare, fragile, tightly bound, or brittle books that cannot withstand the stress imposed by traditional photocopiers. Improvements in paper, toner, and ultraviolet light and, most significantly, new photocopier designs can now provide a less damaging option to preserve books and produce a long-lasting hard copy of the original.

Equipment Factors

Photocopying for preservation purposes developed slowly: copies made by early xerographic methods, such as the verifax wet process, were physically fragile, unstable, and chemically active. They were not of archival quality with long-term durability.[3] The photocopy process, however, has evolved to a point that "archival quality copies can now be produced on a

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number of different copiers . . . provided the equipment is supplied with archival paper and stable toners.'"[4]

Paper

Standards for archival-quality paper have been established by the American Society for Testing and Materials (ASTM) and the American National Standards Institute. Permanent copies should be produced with synthetic sizing at a neutral or alkaline pH and contain an alkaline reserve filler of at least 2 percent calcium carbonate.[5] Calcium carbonate serves as a buffer to neutralize acids that might be generated during the aging process or come from the environment.[6]

Many archival-quality papers are now available. XEROX XXV Archival Bond is an acid-free paper assessed capable of lasting several hundred years.[7] An alkaline-based paper, such as Howard Company's Permalife, meets the ASTM standard as the most permanent—it is Type I paper containing the buffer necessary to neutralize acids.[8] In-house testing for acidic content can be accomplished by using a pH pen. A yellow, green, or blue mark will indicate high acid, some acid, or no acid content, respectively.

Toner

To produce a permanent copy, the toner should contain stable resin materials, such as acrylics and polyesters, and stable pigment, such as carbon-black. The fusing process should be balanced to ensure a strong bond to the paper surface.[9] Most plain-paper copiers today use toners that contain a sufficient amount of carbon-black to assure a permanent copy.[10]

Neither of the two general types of dry toners, dual component and monocomponent, appears to affect the relative permanence of the copies if acid-free paper is used and the fusing is properly balanced. The differences between them are in copy quality and maintenance aspects of the system. The dual-component type provides very good copy contrast and definition to lighter sections because of its finer particles and it is generally less expensive. The monocomponent, which eliminates the need for a separate developer, gives better half-tones, provides less expensive maintenance, and is more reliable with fewer parts.[11]

Dry toners use heat and pressure fusing to produce a durable bond. Liquid toners penetrate deeply into the paper and are resistant to abrasion.[12] In the past, use of liquid toners required a specially treated paper; however, a new development, called the Landa process, now allows liquid toner to be used with any type of bond paper.[13] A recent study by the Government Printing Office (GPO) suggests that the liquid process can offer a more durable image. In the future, liquid toners may prove more suitable than dry toners for archival use.[14]

The paper and toner pair is critical for obtaining a relatively permanent photocopy. GPO tests to determine archival quality of xerographic copies concluded that the toner is the more stable component of the paper/toner pair. The tests recommended use of archival-quality paper and determined that the copier should operate at optimum temperature to ensure the melt and flow of the toner.[15] Two in-house tests will evaluate the quality of photocopies: a tape peel test, which consists of gently rubbing tape onto the

copy and lifting it off slowly; and the rub test, which involves placing the copy on a white sheet of paper, applying pressure, and pulling the copy out. If some portion of the image adheres to the tape in the first test, or if smudging occurs during the second test, the copy is not suitable for archival use.[16] Details on how to perform these tests appear in the GPO report *Archival Xerographic Copying.*[17]

Ultraviolet Light

Although possible damage to originals from ultraviolet light used in the xerographic process is a concern, the consensus at a recent preservation photocopying conference was that the length of exposure was not sufficient to cause adverse effect.[18] Some machines, such as Mita photocopiers, provide U-3 screening, which according to the distributor, filters out ultraviolet rays.[19]

Machine Design

To photocopy a book on a traditional copier designed with a flat, centered platen requires that it be opened 180 degrees and pressed flat, with additional pressure to obtain the text in the gutter. This method places great strain on a book's binding and has been a major factor in limiting the use of photocopying of books one wishes to preserve.

In 1971 Xerox introduced the 4000 series copier with its platen flush to the edge. The gutter of tight volumes could be captured; and with automatic duplexing, copies could be made on both sides of the page. Howard White of the American Library Association (ALA) notes, however, that "the Xerox 4000 was the last copier from a major manufacturer that answered . . . unique problems (associated with) copying from bound volumes."[20] Further, with the advent of the automatic feed, the configuration of copiers changed, and since then, "there has never again been a true edge copier. . . ."[21] The aging Xerox 4000 is quickly becoming unsupportable. In response to the need for a copier that would minimize the stress on bindings and provide copies that capture the text in the gutter of tightly bound volumes, ALA and the British Library simultaneously launched two developmental projects in 1983.[22]

Howard White, editor of ALA's *Library Technology Reports* received a grant to develop a prototype face-up copier. Deciding that hanging a book off the side of the machine without proper support would do more damage than good, a book cradle, and which a book could lie off to the side of a host copier was developed. The copier head would be lowered onto the book; and, through use of a series of mirrors, the image would be transmitted onto the copier drum in the host machine. The project had problems developing an add-on feature for an existing copier. Concern was expressed about how an add-on would affect the host copier and the quality of future service on a modified machine. Because the production level would be small and the cost expensive, finding a company to undertake the research and development effort was difficult, and the project was dropped. The British Library prototype, similar to the above venture, also ran into manufacturing problems, but the project was completed.[23] The Archivist Book Copier is currently on the market.

Book Copiers

Four photocopiers designed specifically for book copying are currently available. A table of comparison (appendix A) provides basic specifications and features of six models. The following discussion briefly describes each book copier's design and general characteristics.

Océ Library Copier—1725 & 1925R. Océ library copiers are high-volume, side-edge copiers. The book is placed off the edge at a 105-degree angle (120-degree angle on the 1925R model) and is supported by an adjustable book rest. Adjustable cover hinges can be raised to four inches to accommodate the width of the book. The cover has flaps on the side to keep the flash in and ambient light out. A reinforced glass platen on the edge assists in capturing the text in the gutter. The manufacturer states that the printing is "exceptionally close to the book bind."[24]

Controls are easy to access and clearly marked. Paper trays are internal but slide out for ease of access. One accessory, the foot pedal, is especially convenient because it leaves hands free to turn pages. The 1925R model has a reduction capability from an original of 11 by 17 inches.[25] The Océ, as all other current book copiers, does not have an automatic duplexing capability. Copying on the reverse side can be done manually.[26]

The Océ copiers have a production level of over 100,000 copies per month. Océ offers an excellent maintenance contract, guaranteeing a 95 percent up time.[27] The dual-belt photoconductor system paper path is only 24 inches, lessening the possibility of paper jams.[28] The dealer handles all supplies except paper, replacing the toner at 90,000 copies. The toner light will come on with 3,000 copies to go, providing adequate time to call for service.[29]

Xerox 5042 BookSaver Copier. The Xerox 5042 BookSaver Copier is a medium-volume, side-edge copier. It has a 35-degree, beveled-edge platen with an extension tray to support the book. The cover hinges are adjustable to two inches and there are no flaps. The manufacturer claims it can copy without distortion into the gutter to within 1/16 inch of the binding. Features include wide-range reduction, which can accommodate oversized materials up to 17 by 17 inches; an enlargement capability; and a document-sensing capability, which limits copy area to the width of the book, thus saving toner and running cleaner.[30] The maintenance contract includes parts only; all supplies are separate.[31]

Selectec BOOKMASTER Copiers. The Selectec BOOKMASTER Copiers are desktop models based on a modified Mita copier. Their clamshell opening, dry toner cartridge, and simplified controls provide ease of access, maintenance, and use. All models have front-load panels. While there is no book rest to support the book, the platen cover, with an accordion hinge, gently holds the book in place. There are no flaps on the cover. The original model, Selectec 1603, is a medium-volume machine with a dealer estimated monthly output of 20,000. Its slanted panel is sloped at a 120-degree angle. The manufacturer claims the Selectec 1603 will copy to within 3/32 of an inch of the binding without damaging the spine of tightly bound books.[32]

The newly introduced 1700 Series doubles the monthly output to 40,000 and offers more copying features. Four models are configured differently

to accommodate public access or trained operator use. The 1703/1707 models come in a standard version or with a duplexing or reduction/enlargement capability. The reduction capability can be used for book copying. The enlargement capability, however, is designed for sheets only. The panel of the 1700 is sloped at a 135-degree angle. The maintenance contract for all BOOKMASTER's includes labor and parts.[33]

Archivist. The Archivist is the only face-up copier on the market. It is similar to the ALA prototype except that the book cradle, not the copier head, moves. The host copier is a Mita DC211 with an additional optical system set off to the right side.[34]

The book lies in the cradle at "a normal reading angle."[35] The spine is protected by a flexible, tape-like cloth. The two sides of the cradle can slide up to four inches apart to accommodate thicker books. The cradle moves pneumatically, and air pressure and speed are adjustable.[36] The cradle rises to meet a V-shaped copier head, where the snug fit permits copying to within five millimeters of the gutter.[37] The cradle slides toward the operator, facilitating the placing and removal of the book. The cradle rotates 180 degrees so that left and right pages can be copied without moving the book.[38] The Archivist has no reduction capability and only one copy size, 8½ by 11 inches. A new model Archivist is being introduced that uses an upgraded Mita DC211 as the host copier and will offer two paper trays. This will assist in flat copying; but in the book mode, the machine will continue to accommodate only 8½-by-11-inch sheets.[39]

The optics consist of a series of mirrors that transmit the image to the scanning system of the host copier. Use of multiple mirrors is a possible source of copy degradation.[40] The fact that a British optical system was added to an existing copier may also affect copy quality. During the development of the ALA prototype, Howard White expressed concern about mixing different systems and the impact it might have on performance and service.[41]

Future Trends

Future trends appear to be toward digital scanning coupled with laser copiers. The output is xerographic; however, instead of the original image being projected onto a drum, as is currently the practice, the image is digitized by scanning. The digital signals are sent to a laser printer, which reproduces the digitized image onto a drum; from there the process is similar to any xerographic copier.[42]

Two developments offer nonelectrostatic processing methods for copying from bound volumes. Several years ago, the British Library developed a digital book copier. Like the Archivist, it has a rotating book cradle; however, the scanning unit, rather than the book cradle, moves to meet the gutter of the book. A slow scan can double exposure time, thus enhancing light originals. An important advantage is that the book needs to be opened only to 45 degrees. Not unlike the Archivist, scanning speed is slow and operator dexterity is needed to avoid damage to the book.[43] The Digitizer can read to within 3 millimeters of the gutter.[44]

The newest development in book copying, also developed by the British Library, is a photographic process called Electroluminescent Copying. A

thin, flexible, electroluminescent lamp is slipped between the pages along with a sheet of photographic paper. The lamp is illuminated and then the photographic paper developed. The British Library claims that the book needs to be opened only a few millimeters to insert the lamp and paper. The lamp does not glow around the edge; therefore, there will be some extremely tightly bound books whose gutters cannot be completely captured. The system is being marketed as the "Bookmark" copier. According to the publishers of *Information Media & Technology,* the reintroduction of older photographic processing techniques will be useful for the copying of rare books.[45]

Choosing a Photocopier

Identifying Needs

The selective process in choosing a photocopier begins with identifying specific needs. Format and size of materials in the collection; monthly output; intended use; and operational variables of cost, quality of copy, speed, ease of use,[46] and, particularly for preservation purposes, the book copier design all play critical roles in defining the most suitable copier.

Gathering Data

Following identification of specific needs, collecting data to determine and select the best book copier can begin. Four basic sources of information will assist in the evaluative process: general literature, manufacturers' brochures, comparative test evaluations, and a personal, hands-on use of the equipment and interviews with users. Regarding general literature, there is a paucity of source material on the subject of preservation photocopying and even less that specifically addresses equipment. Journals and newsletters such as the *Restaurator, Information Media & Technology, Conservation Administration News,* and *Abbey Newsletter* have some information on equipment developments. Once the models of photocopiers are identified, manufacturers' brochures and discussions with distributors provide basic specification data and specific design features. Comparative test evaluations are very useful for objective evaluations based on independent testing. Such evaluative data can be found in *Copier Review,* published by Buyers Laboratory, and Datapro's *Office Products Bulletin.* These publications are not generally available in libraries, but access to them is possible through the photoduplication division of government agencies, schools, or businesses that subscribe. Lastly, a hands-on evaluation and interview can be extremely useful in identifying the pros and cons of the equipment and is a must before deciding on a specific system. An on-site checklist of equipment factors—size, output, type toner, image quality, and ease of use—and other variables such as cost and maintenance considerations is provided at appendix B.

Conclusions

Most photocopiers can be used for preservation photocopying, provided they are equipped with archival paper and a stable toner. Continuing improvements in conventional copier capabilities, including increased speed, a variety of functions, increased ease of use, color copiers, and higher im-

age quality, can be expected.[47] In terms of book copy designs, the four book copiers cited, while not ideal, offer substantial relief from copying at a 180-degree angle. While more manufacturers may enter the market anticipating a large library audience, development of an ideal angle of 90 degrees or less will probably not be achieved, due largely to the limited demand by a select clientele. The selection process must weigh the trade-offs of each against specific needs and, of course, budgetary constraints.

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Appendix A. Table of Comparison

Source: Specification data were compiled from a variety of sources: manufacturers' brochures and fact sheets, discussions with sales representatives, journal articles, and an RTSD handout, "A Side-by-Side Comparison of Three 'Edge' Copiers."

Edge Copiers

Specifications	OCÉ LC 1725 (1925R)	XEROX 5042	SELECTEC 1603	SELECTEC 1707
Model type	console	console	desk-top	desk-top
Dimensions	H 42.3" (42.7") W 68.2" (67") D 30.4" (31")	H 41" W 47" D 29"	H 15 5/16" W 28 1/8" D 23 5/16"	H 22 7/16" W 29 3/4" D 25 9/16"
Weight (w/o sorter)	760 lbs (900 lbs)	375 lbs	162 lbs	246 lbs
Power	115v/20a, 230v/20a (230v/20a)	115v/15a	110/120/220/240v	120v
Speed	45cpm	18–35 cpm (paper size)	21 cpm	32cpm

Specifications	OCÉ LC 1725 (1925R)	XEROX 5042	SELECTEC 1603	SELECTEC 1707
Monthly volume	10,000–100,000	5,000–25,000	0–20,000	1,000–40,000
Platen size	8½" × 14" (11" × 17")	17" × 17"	11" × 17"	11" × 17"
Paper tray capacity & paper sizes	dual—2200 sheets 8½" × 11" 8½" × 14"	dual—925 sheets 8½" × 11" 8½" × 14" 11" × 17"	dual—500 sheets 8½" × 11" 8½" × 14" 11" × 17"	triple—1000 sheets 8½" × 11" 8½" × 14" 11" × 17"
Photoconductor type	belt	drum	drum	drum
Toner	dry monocomponent	dry dual component	dry dual component	dry dual component
Reduction capability	no (yes—2 steps fixed: 65% ledger to letter; 75% legal to letter)	yes (+ enlargement) in 1% increments; 64–141%; 5 preset selections: 6/74/94/129/141	no	yes—in 1% increments; 64–100%; enlargement capability for non-books only
Contrast range	variable: 6-level lightening; 4-level darkening	3 fixed levels: lighter, darker, normal	variable	automatic or variable
Duplexing	manual	manual	manual	available
Accessories	foot pedal	none	foot pedal	foot pedal
Book rest	sloped side-edge panel w/adjustable book support	beveled side-edge panel	sloped front-edge panel; stationary book support	sloped front-edge panel; stationary book support
Angle	105° (120°)	125°	120°	135°
Depth of copy	Close to book binding	w/in 1/16" of book binding	w/in 3/32" of book binding	not available
Cover	accordion hinge up to 4" w/cover flap	adjustable hinge up to 2"; no cover flap	accordion hinge up to 9"; no cover flap	accordion hinge up to 9"; no cover flap
List price	$14,900 ($16,900)	$9,470	$6,995	$8,795

FACE-UP COPIER

SPECIFICATIONS	ARCHIVIST
Model type	Desk-top
Dimensions	H 57½" W 53" D 23½"
Weight (w/o sorter)	242½ lbs
Power	110/220/240v
Speed	operator dependent
Monthly volume	not available
Platen size	British standard
Paper tray & paper size	Single 8½" × 11"

Photoconductor type	drum
Toner	dry dual component
Reduction capability	no
Contrast range	variable
Duplexing	manual
Accessories	foot pedal (allows seated position)
Book rest	cradle; supple tape for spine; rotates 360°; slides on track for adjustment; pneumatic lift to V-shaped optic copier head
Angle	est. 105°
Depth of copy	w/in 5mm of book binding
Cover	not applicable
List price	$15,999

APPENDIX B. CHECKLIST HANDS-ON EVALUATION AND INTERVIEW

- *Book copying design*
  - —model
    - —edge copier
    - —face-up copier
  - —book rest or cradle
  - —degree of angle
  - —depth into gutter
  - —cover hinges
    - —adjustable
    - —thickness
  - —built-in/attached
- *Size and weight*
- *Electrical requirements*
- *Mobility*
- *Environmental*
- *Monthly output*
  - —low volume (to 10,000)
  - —medium volume (to 50,000)
  - —high volume (50,000+)
- *Speed/copies per minute*
- *Toner*
  - —liquid
  - —dry (dual or monocomponent)
  - —automatic dispenser
- *Image quality*
- *Exposure control/range*
- *Ease of use*
  - —control panel
  - —diagnostic controls
  - —paper loading
  - —clearing jams
  - —adding toner
  - —documentation
- *Paper trays*
  - —capacity
  - —internal/external
  - —paper size
  - —paper feed design
  - —manual bypass
- *Features*
  - —duplexing
    - —automatic
    - —manual
  - —reduce/enlarge
  - —sorter
  - —foot pedal
  - —book mode switch
- *Costs*
  - —initial
    - —buy
    - —lease
  - —recurring
    - —service
    - —supplies (toner, paper)
- *Warranty*
- *Maintenance*
  - —contract
    - —fixed annual fee
    - —additional charges
    - —parts/labor included
    - —supplies included
  - —service
    - —reliability
    - —quality
    - —responsiveness

The Preservation of Library Materials in 1989: A Review of the Literature

Karl E. Longstreth

This paper examines trends in the preservation of library materials as expressed in the published literature from 1989. The trends include action to increase the use of acid-free paper in printing and more work on the problems of mass deacidification technology. There is an increase in funding for preservation. Improving cooperative efforts are seen in an increase in preservation activity in library, state, national, and international organizations. Scholarly concerns about the loss of brittle materials are solicited and expressed in the literature. There is an interest in improving preservation education. A bibliography is given of the literature cited.

This paper examines trends in preservation in 1989, as indicated in the literature. It includes works published in 1989, as well as some works from 1988. Publications of a primarily technical nature are not included unless they contain information of general interest. Reviewed articles are in English only and are taken largely from the library literature. Not all articles or news items published in 1989 are included—only those that illustrate the year's trends and developments. Authors or articles cited in the text are included in the bibliography.

Three strong directions are apparent in this year's literature: a growing lobby for the use of permanent paper; more state, national, and international cooperative effort; and more funding and preservation effort at smaller institutions and at state levels.

A disturbing trend is the publication of misleading, outdated, or erroneous information in the works written as treatment procedure manuals. An example of this is Lowry's *Preservation and Conservation in the Small Library*, in which the author explains what a small library can do to preserve its collection. While it contains some good advice, it unfortunately includes serious errors and makes inappropriate recommendations. In another case, Baynes-Cope's updated manual for the care of books retains an outdated and potentially hazardous recommendation on using DDT.

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The publication of questionable treatment recommendations may reflect professional dispute about proper methods, especially when qualitative evaluation of methods does not exist. One need only look at the debate about deacidification to see this. However, the publication of misleading or erroneous information is not confined to conservation treatment manuals alone; it is evident throughout the literature. Critical, evaluative reviews are essential to help correct errors, and readers need to be aware that alternative views and recommendations exist.

JOURNALS

There are several periodicals that are concerned mainly or solely with the issues surrounding the preservation and conservation of materials. *Conservation Administration News* focuses on the management aspect of the preservation effort. The *Abbey Newsletter* is a central source of preservation information, with a focus on conservation and bookbinding. An annual index is also provided. The *Commission on Preservation and Access Newsletter* contains information on Commission activities and funding and news about other preservation activities. One of the Commission's primary focuses continues to be the reformatting of brittle materials onto microfilm. The names of other periodicals important to the preservation field can be found in Longstreth (1989).

Many library journals include preservation news articles or regular columns, including *Library Hotline, American Libraries, Library Journal,* and *IFLA Journal*. Specialized journals also include preservation on a regular basis, for example, *Art Documentation*.

GENERAL TRENDS IN THE FIELD

The Commission on Preservation and Access is broadening its focus in preservation. The *Abbey Newsletter* has a good article with critical commentary on the Commission (see "1988–89 . . ."). The Commission's "Annual Report" for the fiscal year 1988–89 lists the programs and initiatives of the Commission, as well as its directors, committees, staff, publications, and finances. The commission is active in several areas, notably in brittle books microfilming. International cooperation is also encouraged by the Commission. One such initiative is the International Project. Its purpose is to investigate the possibilities for establishing an international bibliographic database for preserved material. Rütimann describes progress on a pilot project for this database and reports on activities in France and West Germany.

A growing area of concern is the preservation of brittle materials that include both text and image. A seminar on scholarly resources in art history in 1988, sponsored by the Commission on Preservation and Access, addressed this topic. In the report *Scholarly Resources in Art History*, Patricia Battin notes that the focus "was the preservation of intellectual content." Distinctions were made between books and photographs and their differing preservation requirements. It was also emphasized that images in their original state are central in art history. Recommendations and strategies are presented. Deirdre C. Stam discusses how art historians use illustrated texts, and an appendix summarizes recent articles on research in art history.

Scholars' concerns about the preservation of research materials were also made evident. Numerous articles focus scholarly attention on preservation. In their 1988 article, Kamps and Schnell describe their survey of the Firestone Library Shakespeare Collection at Princeton University. They point out the necessity of preserving not only individual works of literature and bibliography, but also complete bodies of literature. The authors support their argument for the preservation of entire bodies of literature by discussing the dangers of selective preservation: "if we do not manage to arrest the destructive process before many of our books have turned to dust, we will abort future and yet unimagined areas of scholarly inquiry before their inception." Black sees preservation through microfilming as a means to assemble as complete a collection of newspapers as possible, given the lack of an "official national collection." G. Thomas Tanselle addresses the need of retaining materials in their original format. Everyone involved in preservation should read his critical evaluation.

State Activities

In the past most of the preservation activity in this country has been limited to the research collections of large universities, the Library of Congress and the New York Public Library (NYPL). However, several state organizations are now involved in assessing the preservation needs of cultural institutions within their states. More state library organizations are interested in preservation, and more states are recognizing the importance of preserving materials in cultural institutions and in public and special libraries. In Michigan the Michigan Alliance for the Conservation of Cultural Heritage was established officially in October 1988. The newsletter of the Alliance was begun in the spring of 1989. The stated goals of the Alliance are "to promote public discussions on the value of cultural resources, to help statewide organizations coordinate attention to the jeopardized condition of cultural artifacts in Michigan," and "to foster action by individuals, organizations and offices of government to help ensure the vitality and continuity of our cultural heritage."[1]

Shubert provides a descriptive account of New York State's preservation program and notes that "four years of experience with the program shows that a coordinated approach to preservation, in which institutional, state aid, federal, foundation, and other funds are integrated is an important part of assuring access by scholars of today and the future." He also notes that most of the grant funds in the program (41 percent) have gone to physical treatments. Other funds were for microfilming, planning, environmental control, disaster preparedness, and education.

Planning

Gay Walker has written two helpful articles on assessing preservation needs and planning for preservation activity. These provide a concise listing of considerations when developing a preservation plan.

Calmes and Baer summarize the work of the National Archives Advisory Committee on Preservation. The committee was formed in 1979 to provide advice to the Archivist of the United States, notably on documents of national importance, such as the Declaration of Independence, the Constitution, and the Bill of Rights. It issued a set of recommendations in 1981

and, after review, a revised set in 1984. The committee remains active in providing technical and scientific advice to the National Archives.

Grants and Funding

The most significant development in the area of grants and funding is the increased availability of money, especially for microfilming. The National Endowment for the Humanities (NEH) Preservation Program received an appropriation of $12.5 million, an increase of $8 million from the 1988 fiscal year. This has had three important results: more filming can be done; smaller libraries and archives have begun to band into cooperative groups to apply for funds (for example, the RLG Great Collections Microfilming Project Phase II was for mid-sized libraries); and the availability of these funds sparked continuing debate about funding comprehensive preservation programs.

Other library groups became increasingly interested in funding. For example, Martinez reports on an Art Libraries Society of North America Eastern Regional meeting in June 1989. This meeting was a symposium on funding for preservation, with two speakers, George Farr of NEH and Margaret Child.

Environmental Problems, Disasters and Disaster Planning

Libraries were seriously damaged in both of the principal disasters of 1989—Hurricane Hugo in September and the Loma Prieta Earthquake in October. Numerous reports are found in both the library literature and the general media. In South Carolina, several branches of the Charleston County Library system lost many or all of their books.[2] Flagg describes damage to libraries in the San Francisco Bay area. Many bookstacks collapsed, and several libraries suffered severe structural damage.

The Canadian Library Association has produced a book on disaster management (England and Evans). The authors view disasters as including the slow deterioration of acidic paper, and so also discuss preservation concerns relating to it. This volume has good information on planning for disasters, reacting to them, and preserving materials. However, there is some questionable material in the book; for example, on drying books.

There have been other significant publications in this area in 1989. DePew has written on statewide disaster preparedness. Brezner and Luner describe using a microwave oven as a means to kill insects in books. They caution that studies are necessary to determine the long-term effect of microwaves on paper, and the authors are undertaking this study. They do note some detrimental effects to some materials, and potential dangers in use.

Paper Quality and Deacidification

Two important directions in 1989 were the increasing emphasis on the production and use of acid-free, or permanent, papers in printing and the continued development of mass deacidification technology.

It is not uncommon to hear that we are moving toward a "paperless" society and that this trend will have a great impact on libraries. An article

by Edward Tenner, "The Paradoxical Proliferation of Paper," gives many examples of events or activities that indicate that the use of paper has increased, not decreased. He states that "paper is flourishing, not in spite of but because of electronics."[3] He quotes the director of the Rush Medical Library, who said, "Many libraries are now acting as printing presses for electronically stored information and as duplicators of printed materials."[4] Tenner points out that it is not a good assumption that electronic records will remain readable, even for a "fraction of the two- or three-hundred year life expectancy of acid-free paper."[5]

George Cunha has written an update to his 1987 report on mass deacidification. He notes that controversy and debate regarding the efficacy and safety of the processes continue. An important development is the emphasis on both deacidifying and strengthening paper in one process. As most data on deacidification technology are from the companies that have developed the processes, Cunha states that there is a "pressing need for a public or privately funded evaluation by an independent laboratory of the effect on books and paper, cost-effectiveness and the safety and toxicity of all the systems." This work, while in part technical, should be consulted by anyone interested in deacidification of library materials.

The NYPL has established the New York Public Library Center of Paper Permanence (Swartzburg). IFLA is actively pursuing cooperative international efforts in permanent paper, with three resolutions passed at the August 1989 meeting in Paris. These resolutions are to encourage the use of permanent paper by urging governments (and paper manufacturers and publishers) to adopt policies on the use of permanent paper, by developing an international standard for permanent paper, and by setting an example by using permanent paper.

Many organizations are more concerned with paper permanence. The Society of American Archivists (SAA) has passed a resolution "to encourage the use of permanent paper by all government agencies and other records-creating organizations" (see "SAA is Active. . ."). The *Abbey Newsletter* lists those publishers who, as of March 7, have signed the "Declaration of Book Preservation," which is a sign of commitment to publish the first printings of "quality hard-cover trade books" on acid-free paper (see "Authors . . .").

A description of the Paper Preservation Symposium, sponsored by the Technical Association of the Pulp and Paper Industry (TAPPI), is given in McCrady (A) and in Aspler. McCrady recounts the debate and argument in this volatile field and notes that misconceptions and resistance still plague efforts to improve the quality of paper used in publishing. TAPPI has published the proceedings from this conference.

Important activities are occurring in Congress and the executive branch of the federal government. Two directions are evident: a push by the Joint Committee on Printing to use acid-free papers and a mandate to the Solid Waste Disposal Act that requires the government to buy recycled paper. There is a conflict in these two activities, as recycled fibers may come from any source, and thus may be unsuitable in permanent paper. Any paper made with recycled fibers is weaker than an equivalent paper made without recycled fibers. If passed, the Walgren Amendment to the Solid Waste

Disposal Act will limit this effect by ensuring that recycled paper is permanent paper, when appropriate. The appropriate uses of permanent paper in government printing are being set by a directive from Congress to the Government Printing Office. This directive instructs the GPO to work with the Joint Committee on Printing to identify archivally important publications and to print them on permanent paper (see "Congressional Action . . .," "Hearings. . . ," "Recycled Paper . . .," and "The Walgren Amendment . . .").

The libraries of the Committee on Institutional Cooperation (CIC) have undertaken a program to evaluate mass deacidification of paper-based library materials. Building on work by other organizations, the CIC study will evaluate process chemistry, material compatibility, toxicology, material handling, engineering, dependability, and cost (see "CIC will Evaluate . . .").

Whitmore and Bogaard presented a poster session at the May 1989 meeting of the American Institute for Conservation. They reported on research relating to the effects of metallic compounds (zinc, calcium, and magnesium salts) in deacidified paper and their effects on paper degradation. More research is called for, but their preliminary results indicate that papers with zinc salts degrade more rapidly than untreated paper or paper that contains calcium or magnesium salts.

Preservation of Paper-Based Media

Growing awareness of the importance of preserving materials in all types of institutions is more apparent this year. Schrock discusses the importance of retaining documentation about conservation work on art and artifacts (including library materials). She reports on a study by the American Institute for Conservation funded by the Getty Trust and the National Historic Publications and Records Commission. This study assessed the feasibility of an archives for treatment records.

Jones and Ritzenthaler discuss the implementation of an archival preservation program. It is a good overview of the preservation problem, with emphasis on archival materials. It discusses causes of deterioration, components of a preservation program, planning, and implementation. It also discusses the integration of preservation into archives management, so that preservation practices are part of "archive functions such as appraisal, accessioning, arrangement and description, storage and housing, reference use, and exhibition."[6] This information is pertinent to librarians as well as archivists.

Brittle Books and Reformatting

In *Brittle Books Programs*, an ARL/OMS SPEC Kit, a survey and descriptive information are provided for twenty-one research libraries. Included are organization charts, work forms, flow charts, search forms, procedural guidelines, reformatting procedures, and record-keeping procedures. As with other SPEC Kits, it presents unedited materials from the responding institutions so that a reader can see a sample of what the libraries use in carrying out their programs.

Non-Paper-Based Media

Several large grants have been awarded to fund preservation activities for film. The Image Permanence Institute received $585,403 in NEH and matching funds to study the effects of air pollution on both color and black-and-white microfilm. The National Endowment for the Arts funds a film preservation program that gave three large grants totalling $33,000 to preserve nitrate-based films (see "Some Big Grants . . ."). Pinion gives an introductory overview of collection preservation and access to audiovisual materials. She discusses the role of national libraries and the need for a national collection, considering legal deposit as a method to accomplish this.

Preservation Education

The literature indicates a trend toward integrating preservation education in library school curricula, and ensuring that training meets some minimum standards. Conway addresses the needs of archival preservation education and the central problem of a standard definition for conservation and for preservation. While their meanings might be apparent in context, there is still disagreement as to what precisely they should mean. A current trend is to use preservation as the encompassing term, and conservation to mean the performance of treatments. Conway offers his own synthesis of an operative definition of archival preservation. He then discusses how to develop a program of archival preservation education. Conway draws on the work of others and indicates what he sees as important events and publications.

A new special interest group in the Association for Library and Information Science Education will address preservation instruction and the dissemination of information about preservation. Central concerns will include curriculum development (see "Preservation Administrators . . ."). The Society of American Archivists has passed a resolution to include preservation knowledge as a part of the requirements for certification (see "SAA is Active . . .").

In two articles, Feather and Lusher examine the preservation instruction given in British library and information schools. The authors note that there has been an increase in the number of courses in preservation and related areas. The authors discuss preservation in the sense of managerial responsibility and stress that this knowledge is of more importance to librarians than is technical knowledge, which is of importance to those actually carrying out treatments. Of the fifteen library schools in Britain, thirteen offer some conservation instruction. Feather and Lusher also discuss British and American trends.

Some institutions are looking at the need for more conservation training. The graduate Art Conservation Department of Buffalo State College is working on planning a curriculum for training archives conservators. A report summarizing the NEH-funded planning study is planned for the fall of 1990 (see "Training . . .").

Cooperative Activities

The Commission on Preservation and Access and the Association of

Physical Plant Administrators have formed a task force on environmental conditions so as to develop a course on preservation needs of college or university libraries for facilities managers.

The proceedings of the U.S.-U.S.S.R. Seminar on Access to Library Resources through Technology and Preservation have been published by the American Library Association (Doyle). This seminar was held at the Library of Congress in July 1988, and the four general sessions included one devoted to preservation. General Session IV was entitled the "Current Status of Preservation Programs," and five papers were presented on preservation in the Soviet Union, five on preservation in the United States.

CONFERENCES

Conservation Administration News has a regular column on meetings and conferences that provides a good summary of each event.

The National Preservation Program Office of the Library of Congress initiated a three-day conference in March 1989. The program was the first conference on state preservation programs (McCrady B). The National Archives held a conference entitled *Current Trends in the Preservation of Audiovisual Collections* (McCrady C). The speakers addressed the preservation of photographs, films, sound recordings, and video recordings. The international symposium *Managing the Preservation of Serial Literature* was held at the Library of Congress in May 1989.

IFLA has published the proceedings of the international symposium on newspaper preservation and access held in London in August 1987 (Gibb). The conference began with a series of papers on the history, bibliography, and uses of newspapers, which set forth the importance of involving researchers and other users in making decisions about the process of preservation. There are also papers on managing a newspaper collection, on microfilming, and on national approaches to preservation. Several workshops were held on bibliographical aspects, users, filming, indexing, preservation strategies, conservation, and new developments in technology. Of note is the workshop on conservation, as this is a particularly troublesome area due to the size of newspapers and the often very poor quality of paper used in printing. Banik reports that promising work is being done in West Germany and Austria on mass deacidification and strengthening of newspapers. Gibb provides a good summary that lists the important themes of the conference.

The *Restaurator* published five papers from the conference on microenvironmental research held at the U.S. National Archives in April 1988 (see "Microenvironmental Research and New Directions in the Care of Collections").

Margaret Byrnes has edited the papers of a symposium on preserving biomedical literature in the *Bulletin of the Medical Library Association* (see Byrnes, DeBakey, Kirkpatrick, Paulson, and Richards).

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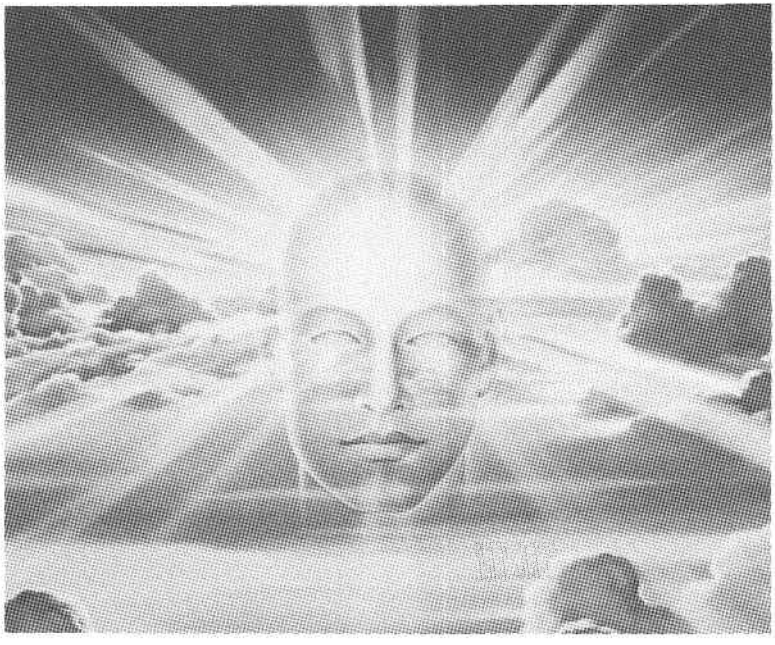

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The Reproduction of Library Materials in 1989

Erich J. Kesse

The author reviews the literature of the reproduction of library materials published in 1989. Literature reviewed belongs to the archives and library professions, as well as to the reprographics and imaging industries. Topics include use and impact of both established and new technologies.

Establishing the boundaries for a survey of literature relevant to the reproduction of library materials has become an increasingly difficult task. Boundaries have been stretched by new technologies and a burgeoning class of imaging industry literature. In preparing this review, I have been constantly reminded of Mark Twain's characterization of Cincinnati. "If the world is going to end," he is said to have remarked, "then I'm going to Cincinnati. The world will end seven years later there." Quiet echoes of Twain can be heard in the literature as the boundaries of reproduction expand. In the selections that follow, I have noted references that seemed to meet the interests of the Reproduction of Library Materials Section (RLMS) of the Association for Library Collections and Technical Services (ALCTS) as well as those that indicate a future for reproduction of library materials.

Subjects covered include the use of microforms in libraries, bibliographic control, micrographics equipment, micropublishing, preservation microfilming, technical production of microforms, and microform standards, as well as other photographic media, photocopiers and photocopying, telefacsimile, and audiovisual media and recorded sound. In addition, there are sections on new technologies and copyright.

Microforms in Libraries

The place of microforms in libraries has not yet been surpassed or replaced by new technologies. A number of authors continued to study the relationship of micrographics and new technologies. Some authors, such as Bida, Carman and Willis, predicted the long-term coexistence of old and new technologies and noted that microforms still capture far more detail than new technologies. None, however, suggested that new technolo-

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gies will not gain ground. Morris and Raben considered the impact and potential of electronic information and new technologies, and each suggested that "information brokers" such as the Online Computer Library Center (OCLC) because of their bibliographic control capabilities will provide access to information reproduced in electronic or digital format. The most recent review by the Association for Information and Image Management (AIIM) of the state of the information and imaging industry examined both micrographic and electronic technologies and presented a comprehensive overview of the industry with an eye to the future. Torok, briefly reviewing the role of microforms in librarianship, posited a strategy for embracing this future that arises out of experience with micrographic information reformatting.

With regard to microforms in libraries per se, emphasis was placed on preservation. Reilly prepared a "Statement of Research Needs in Preservation of Library Microforms." The stability of microfilm in storage was a primary concern, with two facets: storage and inspection. Neale examined the myths and realities of "archival" film in "archival" storage, with an emphasis upon standards. The topic of inspection of stored microforms was addressed by Mobley and the AIIM. Mobley described an automated microfilm inspection program. AIIM produced, for the first time, its recommended practice for inspection of stored film as American National Standards Institute (ANSI) standard MS45-1989. The standard updates government and military inspection procedures defined in 1967 and 1975.

Bibliographic Control

Rütimann began an international project to create an international database of bibliographic records for preserved materials. The project would bring together, for the first time, records of preservation microforms from around the world. Research Libraries Group (RLG) activity in this area was also noted ("Progress Reported. . .").

Use of the USMARC format(s) for bibliographic control of microforms saw momentous changes in 1989. Changes ranged from a minor revision of the 007 field, allowing libraries to distinguish between film-base types (including polyester film base for the first time), to strategies for recording preservation microfilming activity. Two strategies were put forward. That of the Association of Research Libraries (ARL) mandated data elements for inclusion in the bibliographic record. That of the Multiple Versions Forum, held in December 1989 and published in early 1990, suggested a two-tiered, hierarchical configuration of bibliographic and holdings records. The forum report represents a conceptual design for attaching holdings records for both original and microform copies to a single bibliographic record.

Nadeski considered retrospective cataloging of microforms, introducing concerns associated with multiple versions and analytics of microform sets. Bibliographic control of and cataloging problems associated with large microform sets were also considered by Joachim and Leung. Joachim described the work of Indiana University Libraries in cataloging major microform sets and detailed problems associated with this activity. Leung detailed accomplishments since 1980 and described set-processing

procedures. She called upon micropublishers to become involved in the creation of USMARC or compatible records for microforms.

MICROGRAPHICS EQUIPMENT

Development of micrographics equipment was slow in comparison to that of new technologies seen at AIIM shows or recorded in either its sourcebook (AIIM A) or the international sourcebook (*1989 International . . .*). News for users of Kodak's MRD-2 planetary camera was not good as rumor circulated that it would soon be removed from the market. A survey of planetary cameras listed the MRD-2 as one of only ten available planetary cameras, as one of the three most affordable, and as the only one manufactured in the U.S. The survey also listed the newest products on the market. Other news regarding planetary cameras came from Felts, who described use of blips for automated retrieval.

In a report on color microfilm, the superior image capture of Herrmann & Kraemer cameras was noted. Also, AIIM released a product specification sheet for readers and reader printers. (AIIM H)

MICROPUBLISHING

In micropublishing, 1989 saw an increase in concern for the quality of commercially produced microforms. The Micropublishing Committee of the Resources Section of ALCTS published a checklist for libraries investigating microform quality. The Commission on Preservation and Access announced sponsorship of a pretest to survey micropublishers regarding compliance with standards and quality microform production (''AALL to conduct . . .). The survey, designed by the American Association of Law Libraries (AALL) and RLG, evaluates how commercial microforms fit into a national preservation program. To ensure the quality of commercial microforms, Walker produced a sample agreement for commercial reproduction of materials belonging to libraries (Walker B).

PRESERVATION MICROFILMING

In the United States, preservation microfilming reached a popular audience with the release of the film *Slow Fires*; one reviewer of the film described preservation microfilming as a ''moral imperative'' in a battle to stave off an ''impending disaster.'' In the battle itself, Walker described a programmatic approach to preservation microfilming, calling for further study of optical character recognition (OCR) and campaigns to increase acceptance of microforms among users (Walker A). Cox addressed selection of historical records for microfilming in the year RLG applied for the first national cooperative grant to film archival materials. From a service bureau's point of view, Jones described the role of the Mid-Atlantic Preservation Service (MAPS) in preservation microfilming, as well as its near- and long-term expectations (Jones A). Beyond its role as a service bureau, MAPS also conducted research into ''preservation microfiche'' (Jones B). Though presented as ''the final report on step & repeat camera (105mm) operating strategies. . .,'' the report provides a frame of return for further study now being conducted by a subcommittee of the RLMS Standards

Committee. Nelson provided the most comprehensive review of the year's achievements.

Peripheral to the issue, AIIM released a study of salaries and benefits in the industry (AIIM E). The study suggests that noncommercial agencies have a difficult time retaining trained staff because of their low pay scales.

Technical Production of Microforms

The potential of color microfilm was a topic of concern addressed by C. Lee Jones of MAPS and James Reilly of the Image Permanence Institute (IPI), as well as AIIM. Jones and Reilly, it was reported ("Color Microfilm . . ."), found Herrmann & Kraemer color cameras produced greater lines of resolution than most monochrome cameras. AIIM's technical report discussed supplies, practices, and processes in addition to equipment (AIIM C).

Debate over the use of ammonia in the reproduction materials manufacturing industry, begun in 1987, was revisited in 1989 when OSHA issued new exposure standards for air contaminants. Publications concerning the use of ammonia in the industry unanimously argue against OSHA's reclassification of ammonia ("Anhydrous Ammonia . . .," and "OSHA on Ammonia"). The Association of Reproduction Materials Manufacturers (ARMM) argued most vigorously, detailing use of ammonia in the industry. Ammonia is instrumental in diazo microform production. Debate does not address off-gassing during storage. Brady, discussing microfiche duplication methods, and Rupp, extolling the virtues of diazo (Rupp B) did not address the debate but rather the economics and ease of the methods.

Other issues in the area of technical production of microforms include barcoding on microfilm (AIIM B), environmental and right-to-know regulations (AIIM D), and silver recovery techniques (AIIM K).

Micrographic Standards

AIIM marketed a new compilation of preservation standards (AIIM G) and introduced new standards for expungement and deletion of microfilmed images (AIIM J) and for inspection of stored microfilm (AIIM I). ANSI released new or revised standards for enclosures and containers (A), brittleness of film (B), folding endurance of film (C), safety film (D), and engineering reproductions (E). AIIM also began work to revise its standard MS23–1983, which details operational procedures for microfilming.

Rupp reported on international standards developments within the International Standards Organization (ISO) (Rupp A). Courtot's column provided periodic updates on U.S. standards activity in *FYI/IM*.

Photocopiers and Photocopying

McKern presented the work of the Copying Committee of RLMS, which included survey results relevant to public-use copiers in library services. "The purpose of the survey was to answer two questions: (1) What features are essential for public-use copy machines in libraries? and (2) What are libraries willing or able to pay for those features?" Service, durability, image quality, edge copying, and accessibility were among desired fea-

tures. Williams presented some of the latest information on photocopier development.

TELEFACSIMILE

Two items, McConnell and Watson, discussed telefacsimile broadly. Both provided an overview of fax, beginning with a brief review of standards and devices and including discussion of current facsimile technology. Though McConnell was more detailed, each was written to assist in definition of fax needs and selection of an appropriate system. McConnell, unlike Watson, also considered the future of fax in relation to electronic imaging systems. Williams warned that fax papers are thermal and therefore transient.

AUDIOVISUAL COLLECTIONS

Much of the emphasis in preservation of audiovisual collections is concentrated on cleaning, conservation, and storage rather than reproduction. Moreover, concern for reproduction and reproduction media cannot be separated from consideration of archival storage criteria.

In the area of motion picture film, the Library of Congress ("Library's Preservation Lab . . .") reported the activity of its Motion Picture Preservation Laboratory, briefly describing reproduction and other preservation efforts.

In the area of photographs and photonegatives, reproduction of duplication was considered by Puglia and Sundt. Puglia presented an outline of considerations related to duplication. Sundt, concerned in part with duplicating films, and Rempel, were primarily concerned with the storage of masters. Young and Burgess were concerned with the impact of storage materials and environment on stored photographic materials. For its part, ANSI revised and replaced standard PH1.53–1986 with IT9.2–1989, governing filing enclosures and storage containers.

In the area of recorded sound, Paton reported on a meeting of the Association for Recorded Sound Collections/Associated Audio Archives Committee, noting that the ANSI IT9 Committee and the Audio Engineering Society are discussing a cooperative venture to test magnetic and optical media for archival qualities. The intent of the venture is the "development of authoritative recommendations for acceptable characteristics of archival storage media [for recorded sound]." Vanker discussed the possibility of digital audio tape (DAT) as an archival medium. Originally created for video applications, DAT, Vanker suggests, is a viable "backup technology" with many potential applications for which standards must be developed (Vanker A).

NEW TECHNOLOGIES

The literature of new technologies available for use in reproduction is far more extensive than can be reviewed here. The most pertinent literature was authored by Cawkell, Cinnamon, and Saffady, who presented an overview or review of the state of the art of imaging and optical storage technologies. Jander provided the most complete list and description of

available image processing systems. Bagg presented thoughtful criteria for use of CD-ROM.

A number of sources reported the use of optical disk technology by archives and libraries. The *Abbey Newsletter* reported efforts of the U.S. National Archives ("National Archives . . ."). Motley, Reisner and Stovel, as well as the *LITA Newsletter* ("AVIADOR . . ." and "Image Management . . .") reported governmental and other efforts more broadly. Wagner related experience at Human Relations Area File (HRAF). Gonzalez Garcia documented the work of the Archivo General de Indias, and presented what is perhaps the best rationale and most forward-thinking consideration of the use of new technologies for preservation.

Longevity of media was addressed by Day and Osborne. Day reviewed deterioration of CDs and guidelines for optimal storage conditions. Osborne outlined deterioration and reproduction of floppy disks. Pioneer received a patent for an optical disk lifetime estimating device. The device will provide objective criteria for reproduction to preserve information. Vanker (B) suggested digital paper as an alternative to more transient magnetic media.

Standardization of new technologies was addressed broadly by Cargill and Crawford. Though AIIM and ANSI filled their dockets with committees studying new technologies, only one standard ("14-in. Optical. . ."), on optical disk format, was approved for publication.

COPYRIGHT

It was reported that in the United Kingdom the International Publishers Association (IPA) had protested photocopying practices of the British Library Document Supply Centre. IPA referred to copies made by the centre as "unauthorized," while the centre supported the argument that practices represented "fair use." An editorial in *Information Media and Technology* correlates this to U.S. copyright history and argued for "licensed copying" linked to a pay-as-you-use system. ("Publishers Gunning. . ."). The argument remains largely unresolved. With regard to copyright and new disk technology, Shaiman and Williams examined copyright legislation and the notion of "fair use" by libraries.

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Books in Print Plus as a Tool for Analyzing U.S. In-Print Monographs

Thomas E. Nisonger

The spring 1988 version of the Books in Print Plus (BIP Plus) *CD-ROM database is explored in detail to determine (1) the broad characteristics, in terms of language, price, publication date, etc., of the material currently in print in the U.S. book trade; and (2) the value of* BIP Plus *as a tool for answering complex questions and testing specific hypotheses concerning the book trade. This exploratory study discusses a number of problems involved in searching the* BIP Plus *database but concludes it offers much potential as a research tool.*

The CD-ROM format has rapidly emerged within recent years.[1] *Books in Print Plus* (henceforth abbreviated *BIP Plus*), which was released in November 1986, is one of the better-known products. It combines all the bibliographical entries from *Books in Print, Subject Guide to Books in Print, Forthcoming Books, Subject Guide to Forthcoming Books*, and *Children's Books in Print*. The versatile search strategies for accessing its database render *BIP Plus* a powerful tool for analyzing, in a variety of ways, the universe of in-print monographs available to American acquisitions librarians. Becker, Demas, Holloway, Anderson, Desmarais, Mead, and Beiser have reviewed *BIP Plus*, while Hagan has depicted its use in a specific library.[2-9] Brooks has described the version of *BIP Plus* customized for the Ingram ordering service.[10]

BIP Plus is created from Bowker's BIPS (Bibliographic Instruction Publication System) database—the same one used to produce the aforementioned hard copy products. Begun in 1948 and computerized in the late 1960s, BIPS includes all books published or exclusively distributed in the United States except Bibles and other sacred books, periodicals and serials, pamphlets, unbound material, music manuscripts, librettos, song books, and sheet music. Books not available for sale to the book trade or the general public as well as subscription-only titles are excluded. Finally, free books, puzzles, cartoons, cutouts, coloring books, maps, appoint-

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ment books, audiovisuals, and microformat material are not included unless they accompany a book for sale.[11]

BIP Plus can be searched by author, title, subject, children's subject, publisher, series title, keyword, ISBN, LCCN, language, price, publication year, audience, grade level, and illustration, plus combination author/title searches as on OCLC.[12] Boolean searches using the familiar AND, OR, and NOT operators are also possible,[13] resulting in a sophisticated search strategy. The data reported here were compiled on the spring 1988 version, using a dual-floppy IBM PC operating on DOS 3.20 with 512 K, attached to a Hitachi 2500-S CD-ROM drive unit.

The article's objective is twofold: (1) to depict the broad characteristics of the in-print items available in the U.S. book trade and (2) to evaluate the accuracy and potential of *BIP Plus* as a tool for generating data and testing hypotheses concerning the book trade.

Publication Year Searches

The search strategy "py=n" will retrieve the number of entries from a specific year, while the "greater than" (>) or "less than" (<) symbols will retrieve entries published before or after a particular date.[14] The number of items available from a century or a decade can be calculated through a right truncated search strategy, e.g., "py=16$" for the 1600s and "py=196$" for the 1960s. The strategy "py=9999" identifies entries without a publication date.

Year-by-year search results for the twentieth century are presented in table 1. (The data for 1988 do not represent the year's complete output as they were compiled in mid-year.) The greatest number of books is available for the most recent years. The figures taper off for earlier dates. A significant number of books was retrieved for every year of the twentieth century, with the smallest number being 105 for the year 1906.

Figure 1 illustrates year-by-year search results for the nineteenth century. Again, fewer items are available for earlier years. However, some books are available for every year except 1803, 1805, 1821, and 1830, with the highest being 130 for 1899.

A decade-by-decade tabulation for the nineteenth and twentieth centuries, based on truncated search strategies, is presented in table 2. With each preceding decade the number of books declines in a linear pattern with two exceptions: more imprints from the 1930s (3,015) are available than from the 1940s (2,985), and more from the 1850s (189) than the 1860s (172). The decade totals frequently do not match the numbers obtained by addition of the yearly figures for the nineteenth and twentieth centuries. In table 2 the total for the decade 1800–1809 is 22, but addition of the 1800-to-1809 data from figure 1 equals 23. This discrepancy is due to the variant search strategies for the different tables and the influence of subcomposite records—factors that will be elaborated upon later in the paper.

Truncated date searches by century reveal that 691,294 items bear a 1900s imprint date; 2,217 date from the 1800s; 73 from the 1700s; 12 from the 1600s; and finally 2 from the 1500s. The oldest item was a reprint of *Caeremoniale Romanum of Agostino Patrizi,* originally published in 1516. Because *Forthcoming Books* is included in the database one finds many

TABLE 1

ENTRIES BY TWENTIETH-CENTURY PUBLICATION YEAR

Year	Number	Year	Number	Year	Number	Year	Number	Year	Number
1988	26,832	1970	10,014	1952	557	1934	285	1916	134
1987	72,336	1969	8,322	1951	513	1933	271	1915	119
1986	70,023	1968	6,600	1950	557	1932	327	1914	144
1985	66,320	1967	4,533	1949	456	1931	339	1913	145
1984	56,484	1966	3,812	1948	406	1930	327	1912	163
1983	49,984	1965	3,253	1947	382	1929	307	1911	173
1982	44,300	1964	2,813	1946	299	1928	325	1910	151
1981	38,943	1963	2,268	1945	235	1927	303	1909	143
1980	35,601	1962	2,002	1944	214	1926	263	1908	129
1979	29,929	1961	1,614	1943	213	1925	257	1907	132
1978	26,074	1960	1,454	1942	272	1924	265	1906	105
1977	23,544	1959	1,248	1941	277	1923	232	1905	140
1976	21,298	1958	1,070	1940	272	1922	185	1904	145
1975	17,068	1957	1,044	1939	281	1921	164	1903	142
1974	14,584	1956	852	1938	293	1920	174	1902	157
1973	14,015	1955	723	1937	330	1919	164	1901	128
1972	12,010	1954	660	1936	287	1918	125	1900	120
1971	10,499	1953	607	1935	293	1917	127		

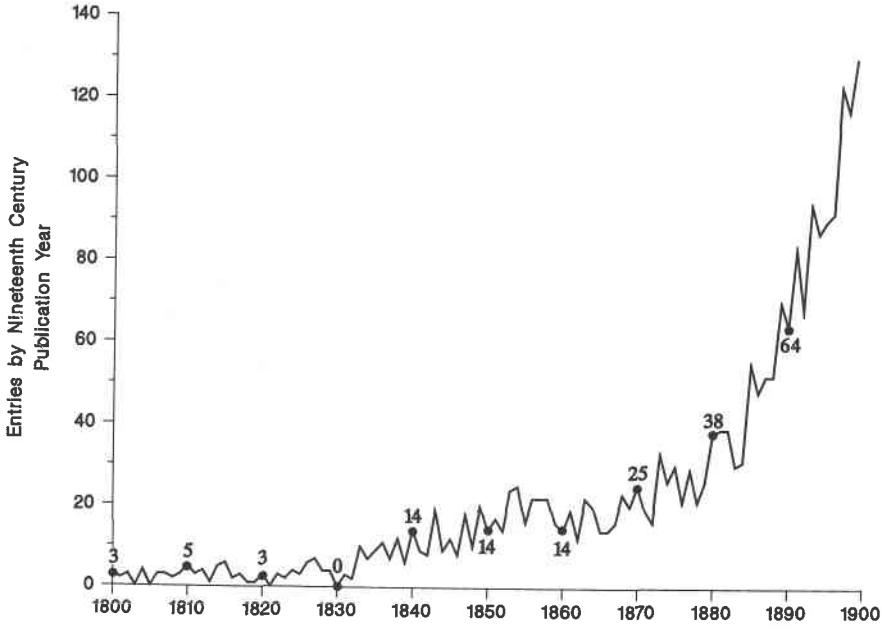

Figure 1. Entries by Nineteenth-Century Publication Year

entries with no publication date (6,992) as well as a scattering for future years: 160 for 1989; 7 for 1990; 2 for 1991; 4 for 1998; and 1 for 1999. The author initially assumed the 1999 entry must be a monumental work that would be in preparation for more than a decade but was shocked to see that it referred to an illustrated thirty-two-page juvenile pamphlet on snow sports! OCLC indicated this item was actually published in 1987, so an obvious error appeared in *BIP Plus*. The 1998 imprints were also errors, but the 1990 and 1991 data stood for legitimate entries.

The large number of citations from the distant past was a surprise. Examination of the citations indicated that this phenomenon resulted from inconsistency in the *BIP Plus* database's handling of reprints, reflecting pub-

TABLE 2

SUMMARY OF ENTRIES BY DECADE

Decade	Total	Decade	Total
1980–89	460,546	1880–89	437
1970–79	177,216	1870–79	233
1960–69	35,712	1860–69	172
1950–59	7,553	1850–59	189
1949–49	2,985	1840–49	127
1930–39	3,015	1830–39	67
1920–29	2,462	1820–29	36
1910–19	1,418	1810–19	31
1900–09	1,315	1800–09	22
1890–99	921		

lishers' divergent methods of reporting data to Bowker. Generally, a reprint date appears in the publication year field and the entry includes a note "repr of n edition," citing the original publication year, which is not searchable. However, for many older citations the original publication date, not the reprint date, appears in the searchable field. Often the item is not even identified as a reprint.

No *BIP Plus* search strategy distinguishes original works from reprints. A keyword search, i.e., "kw=reprint," can identify entries having the word "reprint" in the author, title, series, edition, or publisher fields, but this would represent only a fraction of the total reprints in the database. Reprint editions that do not have "reprint" in a keyword-searchable field and entries containing only the note "repr of . . ." cannot be retrieved. Of the 13,438 *BIP Plus* entries published prior to 1950, 4,295 (32 percent) can be selected under a keyword search, although for the reasons just noted the actual number of reprints among them is undoubtedly higher. The inability to distinguish reprints from original editions reduces the value of publication year analysis, but it is nevertheless useful to determine the number of items from a particular year still available in the book trade.

PRICE SEARCHES

The *BIP Plus* manual recommends that the best method for using the price parameter is to employ the "greater than" and "less than" symbols in conjunction with a price.[15] One can also search for a specific dollar amount, such as "pr=20," which would cover the range $19.50 to $20.49 (*BIP Plus* indexes prices ending in 50 cents or more to the next highest dollar). Because a search strategy including cents would search as if the nearest dollar had been entered, the argument "pr=1.50" produces results identical with "pr=2."[16]

Consecutive searches were conducted at dollar intervals from $1 to $400, i.e., "pr=1," "pr=2," "pr=3," etc. The highest distributions were concentrated in the lower price ranges. More entries (41,809) fell into the $9.50–$10.49 range than anywhere else. Some citations were retrieved for all intervals up to "pr=374," but the higher prices tended to be for subcomposite records, i.e., collective sets rather than specific titles. The largest numbers were concentrated at $5 intervals for ranges under $100, e.g., $75, $80, $85, and at $25 intervals for ranges over $100, e.g., $125, $150, $175. The prices tended to be grouped immediately below the dollar figure, e.g., at the $10 level, the majority of items were priced at $9.95 or thereabouts.

Table 3 illustrates the results obtained by searching at $10 increments up to $100 for: (1) all entries, (2) books for juvenile and young adult audiences, and (3) adult books (i.e., operationally defined as all books not classified for a juvenile or young adult audience). The search strategies "pr <=10," "pr <=20," etc., were used. It is apparent that roughly one-third of all books as well as all adult books are priced under $10.49, while about three-fourths are less than $30.49. In contrast, three-fourths of all juvenile and young adult books cost less than $10.49, and 98.7 percent cost less than $20.49 confirming the commonly held assumption that juvenile and young adult material is less expensive.

TABLE 3

ENTRIES BY PRICE: CUMULATIVE TOTAL BY $10 INCREMENTS TO $100

Total Under	All Books No.	%	Juvenile and Young Adult No.	%	Adult No.	%
$10.49	276,211	36.5	40,345	74.6	235,866	33.6
$20.49	469,345	62.1	53,320	98.7	416,025	59.3
$30.49	569,008	75.3	53,719	99.4	515,289	73.4
$40.49	627,407	83.0	53,790	99.5	573,617	81.7
$50.49	663,019	87.7	53,816	99.6	609,203	86.8
$60.49	685,031	90.6	53,835	99.6	631,196	89.9
$70.49	699,229	92.5	53,853	99.6	645,376	92.0
$80.49	712,777	94.3	53,873	99.7	658,904	93.9
$90.49	721,033	95.4	53,886	99.7	667,147	95.1
$100.49	728,654	96.4	53,901	99.7	674,753	96.2
Over $100.50	27,146		146		27,000	
Total	755,800		54,047		701,753	

LANGUAGE SEARCHES

Any language can be searched, but a search under "English" would produce only bilingual books in English and other languages. The manual lists codes for twenty-seven languages and states all others should be searched by their full names.[17] One would search for French entries, a coded language, by the strategy "la=fr," while Swedish, a noncoded language, would be searched "la=Swedish." Experimentation revealed that noncoded languages can be searched under a truncated form of the name, e.g., "la=Swed$" for Swedish, but one risks selecting other languages beginning with the same letters. It was accidentally discovered that one must search under "la=Lat$" to retrieve Latin citations, even though this language is not coded in the manual,[18] and that languages with two words in their names, e.g., Church Slavic or Anglo-Saxon, must be searched under the first word only.

A recent monograph on the world's languages asserts that over 5,000 are presently spoken throughout the earth, but that only 5 account for 45 percent of the world's population, while 100 account for 95 percent.[19] It was decided to search all the coded languages in the *BIP Plus* manual, all languages listed in an index to the *Library of Congress Cataloging Service Bulletin* and in the *World Almanac's* "Principal Languages of the World."[20,21] A number of additional languages were also searched because of their significance. One language—Marquise—was discovered through serendipity. A total of 220 to 230 searches were conducted. Many of these languages were admittedly quite obscure, e.g., Pushto or Quechua, so it was no surprise when roughly three-fifths of the searches found nothing in the database.

In instances when two names are used for the same language, such as "Cambodian" and "Khmer," or "Persian" and "Farsi," it was not apparent which term to search, so both were tested. A hit was made under

whichever term appears in the bibliographical record, but a consistent pattern was not observed. Five items were retrieved under "Cambodian" and two under "Khmer." "Persian" found thirty-seven titles, but "Farsi" none, whereas "Amharic" obtained two books, but "Ethiopian" did not retrieve any.

Table 4 indicates the search results by language. The major Western Europe languages (Spanish, French, and German) top the list, although hits were made for ninety languages. At least 100 books are available in each of thirteen foreign languages, mostly European. It is possible that additional obscure languages might be found in *BIP Plus*, because only a fraction of the world's 5,000 languages was searched.

TABLE 4

ENTRIES BY LANGUAGE

Lanaguage	Number	Language	Number
Spanish	4,369	Sanskrit	31
French	3,856	Slovenian	27
English (bilingual)	3,845	Serbocroatian	24
German	3,199	Turkish	24
Russian	902	Bulgarian	23
Italian	503	Yiddish	23
Arabic	383	Hindi	21
Latin	300	Romanian	21
Chinese	281	Slovak	18
Greek	232	Vietnamese	17
Portuguese	162	Tibetan	15
Hebrew	149	Esperanto	14
Japanese	147	Armenian	13
Dutch	112	Hawaiian	13
Polish	86	Indonesian	11
Hungarian	66	Tagalog	10
Croatian	64	Urdu	10
Ukrainian	52	Lithuanian	9
Catalan	50	Swahili	9
Danish	50	3 languages[1]	7
Swedish	49	4 languages[2]	6
Norwegian	40	5 languages[3]	5
Finnish	39	2 languages[4]	4
Serbian	39	2 languages[5]	3
Korean	38	9 languages[6]	2
Persian	37	19 languages[7]	1
Czech	33		

[1] Estonian, Icelandic, and Welsh.
[2] Eskimo, Gaelic, Laotian, and Pali.
[3] Bengali, Cambodian, Malay, Navaho, and Thai.
[4] Albanian and Latvian.
[5] Afrikaans and Anglo-Saxon.
[6] Amharic, Basque, Burmese, Chuvash, Flemish, Khmer, Nepali, Panjabi, and Zulu.
[7] Belorussian, Berber, Church Slavic, Coptic, Cornish, Creole, Ewe, Gujariti, Kannada, Kazakh, Marathi, Marquise, Nahuatl, Nyanja, Provencal, Tamil, Telegu, Uzbek, and Xhosa.

TABLE 6

ENTRIES BY GRADE LEVEL AND ILLUSTRATION

Grade Level	Number*	Number Illustrated	Percent Illustrated
K and preschool	19,529	16,141	82.7
1	5,102	3,995	78.3
2	4,844	3,827	79.0
3	7,315	5,381	73.6
4	8,090	5,546	68.6
5	7,301	4,684	64.2
6	6,687	4,204	62.9
7	11,134	5,210	46.8
8	7,730	3,171	41.0
9	7,347	2,449	33.3
10	6,212	1,891	30.4
11	2,046	705	34.5
12	1,627	549	33.7
College	750	273	36.4

*Numbers cannot be totaled because books are usually classified in a range of grade levels and counted in each.

not linear, however. The largest number of books is available at the kindergarten and preschool level followed by the seventh grade.

It would logically be presumed that all first-grade books are classified for a juvenile audience. In actuality, 4,954 of the 5,102 grade-level-one books are "juvenile," while 9 are "young adult." This discrepancy undoubtedly lies in the fact that *BIP Plus* uses the audience and grade-level classifications assigned by the publishers, who are not always logically consistent.

OTHER SEARCH STRATEGIES

The subject and publisher search parameters are also potentially useful for answering questions about the U.S. book trade. These strategies will be examined below.

The database can be searched by more than 63,000 Library of Congress subject headings as well as by provisional subject headings assigned by Bowker when no LC subject headings exist. One can search for a specific heading, such as "Music—Bibliography" or a broad heading that covers both general works on a subject plus the subject subdivisions. The search strategy "Su=Biology" would retrieve general works plus all the subdivisions, such as "Biology—Classification" or "Biology—Terminology."[28] Library of Congress call number ranges cannot be searched.

A publisher search is conducted by entering the parameter "pu" followed by the specific name, e.g., "pu=Harvard University Press." There are 6,325 publishers covered by *Books in Print*.[29] Unfortunately, only specific publishers, not broad publisher categories such as university presses, are searchable.

Due to the large number of subject headings and individual publishers, it is impossible to analyze the entire *BIP Plus* database by subject or pub-

lisher on a global scale, as can be done using the previously discussed parameters. The prime value of these searches would be their use in conjunction with other search strategies to test specific hypotheses or conduct a detailed analysis of a particular subject.

To illustrate the possibilities, one could compare *BIP Plus* with *Books Out of Print Plus* in CD-ROM by publisher and basic subject categories to analyze out-of-print patterns. Specifically, the hypothesis that university press books remain in print longer than trade publications, or humanities books longer than scientific-technical material, could be tested. Moreover, price range searches[30] in conjunction with broad subject categories could determine the price distribution patterns for various disciplines, allowing a new perspective on price data, which is usually presented as the average cost per book. One could test the hypothesis that the higher cost of chemistry books is due to a disproportionately expensive fraction of the titles that skews the average price.

The ability to use combined search strategies adds significantly to the research value. To cite a few of the innumerable possibilities, the illustration parameter could be used in conjunction with subject (to determine which subject areas are more highly illustrated) or with price (to test the hypothesis that illustrated books would be more expensive).

Reliability

The generated data's precision—an obviously important consideration—depends upon two factors: (1) the completeness and accuracy of Bowker's database and (2) the ability of the *BIP Plus* software to search it correctly. It is beyond this paper's scope to evaluate the Bowker database, which is generally accepted as authoritative by librarians. A study of the 1969 *Books in Print* by Cambier et al. found an error rate of 8.8 percent when samples from *BIP* were compared with *PTLA*.[31] Errors in *BIP* were divided into nine categories: author omission, author error, title omission, title error, date omission, date error, price omission, price error, and miscellaneous. Author and title errors would not be relevant to the search strategies used in this paper. Based on calculations from the figures presented by Cambier et al., the error rate for price data would be 1.1 percent and 1.0 percent for publication data—both well within the acceptable margin of error.[32,33]

Three methods are available for ascertaining the accuracy of search results: (1) determining if different search strategies obtain logically consistent results, (2) assessing whether the same search strategy produces consistent results on multiple trials, and (3) directly examining the retrieved citations to ensure conformance with the search parameters.

As previously mentioned, different search strategies produce mathematically inconsistent results. The year-by-year publication date search results from table 1 and figure 1 add to 697,978; the decade total in table 2 equals 694,457; and two century-wide searches for all nineteenth and twentieth century entries equal 693,511. By logic these figures should be identical as they represent all entries from 1800 to the present. Likewise, the sum of the two searches (1) price equals or is less than $50 and (2) price exceeds $50 should equal the sum of the searches (1) price equals or is less

than $100 and (2) price exceeds $100. However, the former is 758,995 and the latter 755,800. Consultation with a Bowker representative indicated these discrepancies, which it was stated should fall into a 1 to 2 percent range, are due to (1) multiple citations in a single entry, e.g., a paperback and a hard-cover edition, and (2) subcomposite records, i.e., separate books that might be sold as a packaged set.[34]

Subcomposite records account for approximately 4 percent of the citations in *BIP Plus*.[35] They consist of a "mother record" for the collective title and "child records," which list the individual volumes. Figure 2 illustrates a subcomposite record. The entry for *The Letters of William and Dorothy Wordsworth* represents the mother record, while the subentries for volumes one and two constitute the child records.

Inconsistent search results are explained by the fact that a search records a hit if the parameter is found in either the mother record or the child records, but a subcomposite record will produce only one hit on a single search, even if two or more of the child records meet the search terms. Examination of figure 2 will illustrate this concept. Year-by-year publication date searches for the twentieth century would produce three hits, one each for 1967, 1969, and 1970. However, a single search for all items published in the 1900s would result in only one hit, even though three volumes in figure 2 meet this specification. Truncated searches by decade would result in one hit for the 1960s and one for the 1970s, as at least one item in figure 2 would meet both specifications. Thus, a result of one, two, or three can be obtained from the same record depending on the search strategy used—a principle that would apply to price searches and hard-cover plus paperback editions appearing in the same entry. Variant search results are clearly due to different counting methods rather than mistakes by the software.

Throughout this project innumerable searches on *BIP Plus* always generated consistent data for the same search strategy and retrieved items invariably fell within the search parameters. Frequently the item that corresponded to the search specifications was in a child record of a subcomposite record, but the impact of this factor has already been discussed. Therefore, the second and third measures of accuracy, as noted above, were fulfilled.

The maximum number of possible hits on any one work in the spring 1988 version of *BIP Plus* was 777,616 (with each mother record counting

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Wordsworth, William & Wordsworth, Dorothy. The Letters of William & Dorothy Wordsworth. De Selincourt, Ernest, editor. Oxford University Press, Incorporated.

1. Vol. I. The Earlier Years 1787–1805. 2d ed. Shaver, Chester L., editor. 1967. $58.00x (ISBN 0-19-811464-8).

2. Vol. II. The Middle Years, Pt. 1: 1806–1811. 2d ed. Moorman, Mary, editor. 1969. $63.00x. (ISBN 0-19-811491-5).

3. Vol. II. The Middle Years, Pt. 2: 1812–1820. 2d ed. Moorman, Mary, editor. Hill, Alan G., editor. 1970. $65.00x. (ISBN 0-19-812403-1).

Figure 2. A Subcomposite Record

only once). Counting child records, there were a total of 798,398 records in the database. Different bindings—hard cover and paperback—for the same edition appear in a single record, which is counted only once in these figures. The author inquired of Bowker why the totals for global price searches (roughly 750,000) and global publication year searches (approximately 700,000) did not equal the maximum number of possible hits (777,616) and was told that not all fields appear in each entry—only the title field must be included in every record.[36]

LIMITATIONS

The searching capabilities of *BIP Plus* contain a number of limitations that reduce its effectiveness for this study's purpose:

1. place of publication cannot be searched;
2. Library of Congress classification number ranges cannot be searched;
3. original editions cannot be distinguished from reprints;
4. books already published cannot be distinguished from those scheduled for publication, i.e., listed in *Forthcoming Books*;[37]
5. paperback and hard-cover editions cannot be distinguished from each other;
6. books for which the price has not been set cannot be searched;
7. it would be desirable to be able to search price ranges ending in even dollar amounts rather than 49 cents;
8. there is no practical means for searching for books in one foreign language only, as opposed to bilingual texts; and,
9. while specific publishers can be searched, it is impossible to globally search by publisher type, e.g., university press, trade, small press.

The data in *BIP Plus* undoubtedly overestimate the number of books actually in print, although it is impossible to precisely quantify this factor. Books reported by their publishers as out-of-print and out-of-stock indefinitely are transferred to *Books Out of Print Plus*. Books reported out-of-stock remain in *BIP Plus*,[38] although many of these are undoubtedly out-of-print.

Furthermore, twenty-four publishers, including Ballinger, Barnes & Noble, Cambridge University Press, Dutton, Harper & Row, Lippincott, and Scarecrow Press have opted to retain their out-of-print titles in *BIP Plus* rather than listing them in *Books Out of Print Plus*.[39] As a consequence of this factor approximately 1.5 percent of the items in *BIP Plus* are actually out-of-print.[40]

Another limitation lies in the inability to precisely replicate the data at a later time. Bowker requires that subscribers return a disc within ten days after receiving the next update. Thus, the exact database on which the research was originally conducted is no longer readily available for rechecking data or replication by other researchers. Furthermore, one must gather all the data for a particular project within a relatively brief time frame. When this study was undertaken, Bowker released updated discs quarterly. Beginning in 1990, *BIP Plus* discs are issued six times per year.

Inconsistency on the part of publishers in reporting data to Bowker creates a problem. The fact that every first-grade-level book is not classified

as juvenile, a relatively minor incongruity, serves as an example. The previously discussed inconsistency in reporting the publication date for original and reprint editions is more serious.

Conclusions

Thus, for a variety of reasons, the data generated from *BIP Plus* are not flawless. Nevertheless, the author is confident that *BIP Plus* is capable of providing valid and useful information concerning the U.S. book trade.

One may legitimately ask what practical and theoretical value this analysis possesses. As most book selection in contemporary American libraries focuses on in-print material, it obviously is useful for collection development librarians to know the full parameters of the available material. Innumerable citation studies have described the characteristics of citation patterns for particular disciplines: *BIP Plus* can provide analogous data for in-print patterns at either the discipline level or for all in-print monographs. Moreover, this investigation has confirmed the potential of CD-ROM bibliographic databases to be used with more sophisticated search strategies to test specific hypotheses.

The search strategies used in this paper, being an exploratory investigation, have inevitably been rather crude, while the study has been limited to a single version of *BIP Plus*. The analysis could be significantly extended by using *BIP Plus* in conjunction with its companion products, *Books Out of Print Plus* and *Ulrich's Plus* (or Ebsco's *The Serials Directory* on CD-ROM). Longitudinal tracking of data on these databases represents another potentially valuable research strategy, as one could calculate the rate at which material goes out of print. Perhaps the version of *BIP Plus* that includes the text of book reviews could be used to analyze reviewing patterns.[41]

In short, *BIP Plus* should not be viewed as simply a technical services, reference, or even a collection development tool, but also as a research tool. From a broader perspective, the author firmly believes that the ever-increasing number of databases available on CD-ROM will open a whole new range of research opportunities in library and information science and other disciplines.

References and Notes

1. Articles on CD-ROM are too numerous to cite. Its significance is testified to by the fact that several journals are devoted to this format, including *CD-ROM Librarian* (Westport, Conn.: Meckler Corp, 1986–) and *CD-ROM Professional*, formerly *Laserdisk Professional* (Weston, Conn.: Pemberton Press, 1988–).
2. Karen A. Becker in *RQ* 27:411–13 (Spring 1988).
3. Samuel Demas, "Comparing Big Bibliographies on CD-ROM," *American Libraries* 18:332–35 (May 1987).
4. Carson Holloway, "Books in Print and Ulrich's on CD-ROM: A Preliminary Review," *Online* 11:57–61 (Sept. 1987).
5. Charles Anderson, "Using Technology," *Wilson Library Bulletin* 63:86–87 (Apr. 1989).
6. Norman Desmarais, "Optical Product Review: Bowker's Books in Print Plus," *CD-ROM Librarian* 2:26–32 (Sept.–Oct. 1987).
7. Margo Mead, "Books in Print Plus," *Technical Services Quarterly* 6, no.2:69–74 (1988).

8. Karl Beiser, "Microcomputing," *Wilson Library Bulletin* 62:65–67 (April 1988).
9. Dalia L. Hagan, "The Tacoma Debut of *Books in Print Plus*," *Library Journal* 112:149–51 (Sept. 1, 1987).
10. Martin Brooks, "Bowker's Ingram-Books in Print Plus: A Case Study," *Laserdisk Professional* 2:46–52 (July 1989).
11. *Books in Print, 1987–88. Vol. 1: Authors A–F* (New York: Bowker, 1987), p.v.
12. *Books in Print Plus User's Guide*, rev. ed. (New York:Bowker, 1987). p.IV–1.
13. Ibid., p.IV-2.
14. Ibid., p.IV-23.
15. Ibid., p.IV-22.
16. The manual states that the search "pr > 15.00" (price exceeds $15) would identify all titles with a list price of $15.01 or more, but experimentation indicated it would actually select entries priced at $15.50 or greater due to indexing to the next highest dollar.
17. Ibid., p.IV-21.
18. A search under "la=Latin" retrieved zero citations.
19. Ronald Wardhaugh, *Languages in Competition: Dominance, Diversity & Decline* (New York: Basil Blackwell, 1988), 1.
20. Helen Savage, ed. *Library of Congress Cataloging Service with a Comprehensive Index*, reprint of *Cataloging Service Bulletins, 1–125*, v.2 (Detroit: Gale, 1980) 1–38.
21. *The World Almanac and Book of Facts, 1988* (New York: Pharos Books, 1988), 232–33. All languages spoken by at least one million people as of mid-1987 are listed here.
22. The data do not add to the total number of English-language items listed in table 5 because a single book can be coded for more than one other language besides English.
23. *Books In Print User's Guide*, IV-18.
24. Ibid., IV-19.
25. Ibid., IV-20.
26. Based on a July 28, 1988, telephone conversation with Martin Brooks, executive editor for electronic publishing for R.R. Bowker.
27. To calculate the number of illustrated second-grade books, three searches would be entered: "gr=2," "il=x," and "cs=1 AND 2" ("cs" stands for "combine sets").
28. *Books in Print User's Guide*, IV-11.
29. *Books Out of Print User's Guide* (New York: Bowker, 1987), vii.
30. At present price range searches are quite time-consuming, but the author assumes this will eventually be corrected by Bowker.
31. Nora Cambier and others, "Books in Print 1969: An Analysis of Errors," *American Libraries* 1:901–2 (Oct. 1970).
32. Specifically, there are 39 price errors and 3 price omissions in 4,000 possibilities for error.
33. There were 27 date errors and 14 date omissions in 4,000 possibilities for error.
34. Based on a February 16, 1988, telephone conversation with Jim Drier, an R.R. Bowker sales representative, who had previously consulted the *BIP Plus* technical services staff.
35. *Books in Print User's Guide*, VIII-2.
36. July 28, 1988, conversation with Martin Brooks.
37. One can search for books whose publication date has not been set, but there is not a 100 percent correspondence between this category and books that have not yet been published.
38. *Books Out of Print User's Guide*, vii.
39. Ibid, vii.
40. The *BIP Plus* publisher index, which lists the number of entries for each publisher, reveals that 40,476 items from these twenty-four publishers are contained in the database. Assuming that the out-of-print portion of these items is the same as the proportion of the total items in *Books Out of Print Plus* to the total in *BIP Plus* (329,268 to 777,616), then 12,042 items from the twenty-four publishers are out-of-print, representing 1.5 percent of the 777,616 items in *BIP Plus*.
41. Reviews are included from *Library Journal, School Library Journal, Publishers Weekly, Choice, Booklist, Reference and Research Book News, University Press Book News*, and *Sci Tech Book News*.

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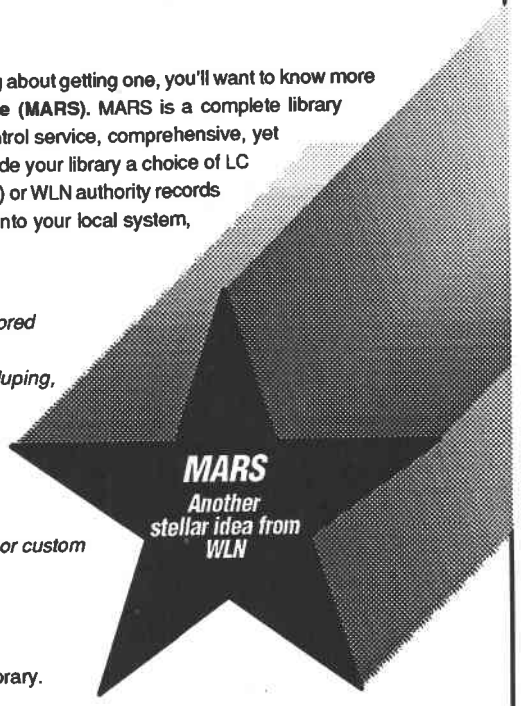

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Shared Authority Control at the Western Library Network

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Cooperative cataloging has been accepted as a norm by libraries large and small for quite some time. Cooperative authority maintenance, however, has not been practiced widely, although one can quickly see the advantage of large, combined resources for authority maintenance due to elimination of duplicate efforts. This paper examines the cooperative efforts of the Western Library Network and its members to maintain authority control over its central bibliographic database. The first section describes the authority maintenance activities by WLN centrally; the second section describes one WLN member library's contribution to authority maintenance and its efforts in updating its local online catalog.

Cooperative cataloging has been taken for granted for quite some time. Libraries across the nation search databases of utilities for availability of MARC records before they invest their time and expertise in cataloging. This practice is formalized under the National Coordinated Cataloging Program (NCCP), in which selected research libraries create national-level bibliographic records based on agreed-upon practices. These records are to be contributed to the Library of Congress database and distributed for the use of the entire bibliographic community via the Linked Systems Project (LSP) or through the MARC Distribution Service.[1] This program itself is an outgrowth of the Library of Congress Name Authority Cooperative Project (LC/NACO) which began operation October 3, 1977, as a joint venture among large research libraries to create a common name authority database.[2] The Library of Congress (LC) is experimenting with a similar cooperative project to establish subject headings.[3] These cooperative efforts reduce the time spent for the creation of duplicate records and permit all parties to reallocate resources to activities promoting the timeliness, wider coverage, and the quality of the bibliographic database.

However, the actual updating of headings in bibliographic records ac-

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cording to the most recent authority information still tends to be performed by individual libraries or local systems. An obsolete authority heading in the same bibliographic record is being revised in the same way in each separate catalog and database throughout the country by local processing, by the use of authority vendors, or a combination of both.[4]

Since authority headings are never static and no one library or local system can hardly keep up with all the authority maintenance of its local database, discrepancies between the headings actually used in the bibliographic database and the correct form of headings in authority records are growing. Catalogers can quickly locate the proper forms of authority headings to be used for an entity or concept, but they may need to look under many different forms of headings in their own database or catalog for the same entity or concept. This causes confusion and frustration.

These discrepancies would be greatly reduced if libraries using the same bibliographic utility could combine their resources and update authority headings in the central database they share. Such a method would make more effective use of each library's limited resources and provide a more up-to-date database to all users of the utility. This paper examines the cooperative efforts of the Western Library Network (WLN) and its members to maintain authority control over its central bibliographic database. The first section describes the authority maintenance activities performed by the staff of the Western Library Network centrally[5]; the second section describes an individual member library's contribution to authority maintenance in WLN by focusing on the activities of the Washington State University Libraries in Pullman, Washington.

WLN Database and Its Authority File

WLN Authority File records are linked directly to all bibliographic records using them.[6,7] This makes it possible for users to find bibliographic records through an authority search or to return to the authority headings from bibliographic records by a single command. The ability to access authority headings through the subdivision level provides great flexibility in searching bibliographic records as well as an efficient tool for authority updating. The global updating of bibliographic records through authority heading changes is another WLN feature.[8] Since the inception of WLN in the 1970s, records in the bibliographic database have been updated in this manner. A more detailed explanation of how the WLN Authority File is constructed follows.

The WLN database contains approximately 6.5 million bibliographic records, which are used by some 390 libraries in the Pacific Northwest. Records are added from LC MARC, BooksCanada, GPO, MLC,[9] COBRA[10] tapes, and online from WLN members through the WLN Input/Edit facility. In the WLN library system, authority headings (i.e., name, uniform title, series, and subject) are extracted from bibliographic records and create a separate but linked authority file. The bibliographic record stores only the internal sequence numbers of authority headings, not the text of headings. No matter how many bibliographic records use a heading, only one authority heading exists in the authority file. It is important to point out that this method of storing authority data does not apparently af-

fect response time for retrieval of bibliographic records.

Authority headings thus created go through two stages of machine examination, preprocessing and validation, before entering the authority file. In the first stage, subdivisions such as "Addresses, essays, lectures," and "Collected works" are removed, and "Gt. Brit.," "Hist. & crit.," "Russia," "Germany (Federal Republic, 1949–)," etc., are changed to the appropriate current forms. Designated fields and subfields may be deleted or converted to current values (e.g., 705 to 710). Some unnecessary initial articles (e.g., those in X30 fields) are deleted, and indicator values and capitalization are adjusted. Necessary punctuation marks are supplied. This part of the validation process is flexible enough to include any obsolete authority terms depending on the source.

In the second stage, headings are checked against the WLN authority file.[11] If the heading matches a *See* reference form in an authority record (e.g., "Chicago. University." *See* "University of Chicago."), it is automatically replaced with the authorized form and the bibliographic record enters the database. If the heading matches a *See* reference form with two or more authorized forms, (e.g., "Negroes" *See* "Afro-Americans" *And* "Blacks"; "Teachers—Salaries, pensions, etc." *See* "Teachers—Salaries, etc." *And* "Teachers—Pensions"), the bibliographic record is returned to the library that created or changed the record with a computer-generated explanation (e.g., RECORD HAS UNAUTHORIZED HEADING—CHECK HEADINGS).

A similar automatic validation program also exists for the WLN Input/Edit facility.[12] With an online command, users can compare headings they are using against those in the authority file when creating or changing bibliographic records. If they have inadvertently used the *see* reference form, as often happens in a retrospective conversion project, the authorized form is automatically inserted into the bibliographic record. When more than one authorized form exists, a message instructs the user to replace it with one or more appropriate alternative forms. Headings retrieved from an authority file search can be inserted into bibliographic records being created, thereby eliminating rekeying and the potential for typographical errors. In addition, authority headings can be extracted from bibliographic records for insertion into new bibliographic records or for finding other related bibliographic records. These automatic features prevent many incorrect or obsolete forms from entering the authority file.

WLN authority records, as they enter the authority file, are merely headings used by bibliographic records. From the inception of the network, however, a central staff has been engaged in authority maintenance. This includes examining new authority headings and adding cross-references and notes based on LC Name Authority File (NAF), LC Subject Authority File (SAF), and *LC Subject Headings Weekly Lists*. In addition, many different authority maintenance tasks are performed daily by the staff, and these activities continuously update the entire bibliographic database.

Authority Maintenance Tasks at WLN

Due to the global change capabilities and the link between the authority file and bibliographic records file, authority maintenance is synonymous

with bibliographic database maintenance at WLN. Human decision making based on standard cataloging tools and examination of bibliographic records using the headings in question are important ingredients in accurate authority maintenance work, and automated machine processing is incorporated in the maintenance activities where it is safely performed. Below are authority maintenance tasks performed at WLN:

1. *Examination of newly created authority headings.* The staff checks weekly listings of new headings that entered the authority file the previous week. MARC tagging, indicators, subfielding, spelling, punctuation, capitalization, spacing, etc., are examined. Obsolete headings that creep into the file (e.g., "New York (City)" instead of "New York (N.Y.)") are corrected. Recognizable variations of a personal or corporate body name, whether used as a main entry or added entry, are upgraded to a single form. The quality of headings created by member libraries is monitored and assistance given to those working with authority headings at member libraries.
2. *Updating of subject headings based on the* LC Subject Headings Weekly Lists. Changed or canceled headings are located in the database and updated to current usage. Revised notes and cross-references are added. Tagging changes (e.g., "Lutheran Church" changed from 110 to 150) are also implemented. If newly established LC headings have not entered the Authority File from the MARC bibliographic tapes, they are created with full cross-reference structures.
3. *Updating of name authority headings due to cataloging rule changes, such as the changes introduced with the implementation of the* Anglo-American Cataloguing Rules, *2d edition* (AACR2). Although name headings are considered to be more stable than subject headings, changes of forms do occur. *AACR2* introduced corporate body headings with a less hierarchial structure (e.g., "Library of Congress" instead of "United States. Library of Congress"), and the use of the "q" subfield for personal authors. The majority of author/title series became title series. The most recent changes include qualifiers for British place names. Name heading changes are also detected when a new MARC bibliographic record replaces the old record. The WLN staff implements these changes immediately and adds cross-references to avoid split files in the database.
4. *Periodic checking and updating of all authority headings based on the WLN-compiled list of significant changes in the past.* Several listings have been compiled for this purpose incorporating authority heading changes that occurred in the last ten to fifteen years. For example, there are lists for obsolete abbreviations; geographic names that changed their forms or indirect/direct usage (e.g., "Byelorussian S.S.R." from "White Russia," and the use of "Babylonia" through "Iraq"); subdivisions formerly allowed under city heading (e.g., "Chicago—Riots, 1968"); and other general subdivision changes (e.g., "Laws and legislation," "Laws and regulations"), etc. These headings are searched throughout the database on a regular basis, and updated according to the current rules.

5. *Maintenance and control of locally established authority headings.* Although a good portion of headings needed for cataloging are already established and listed on NAF and SAF, occasionally new headings must be established locally. They are often headings related to areas outside of North America or headings of local interest, such as local authors, entertainers, corporate bodies, parks, streets, and natural features such as rivers. These headings are established by users according to *AACR2,* and cross-reference structures are created based on the information from several libraries using the headings. Just as the NACO project eliminated redundant efforts by many libraries, this activity saves WLN libraries considerable cataloging time. If LC headings later established do not match local WLN headings, the latter are revised. If WLN headings have more information concerning usage, variant forms, etc., this is sent to LC. This task makes it unnecessary for member libraries to maintain their own authority files even for locally established headings.
6. *Updating of obsolete headings that split into two or more headings.* Bibliographic records containing this type of heading (e.g., "Catholic Church—Doctrinal and controversial works" *See* "Catholic Church—Doctrines" *And* "Catholic Church—Controversial literature") are located, and obsolete headings are replaced with alternative headings based on an examination of title, subject headings, classification, and other pertinent data found in the records.
7. *Annotated Children's subject headings (AC).* AC headings are used by libraries with considerable numbers of juvenile users. A list of exceptional headings to be used only for AC headings appears as part of SAF, and all changes to AC headings are announced in *LC Subject Headings Weekly Lists.* WLN staff adds cross-references and notes and updates any incorrect or obsolete forms.
8. *Modification of headings from Books Canada MARC tapes.* The tapes contain records cataloged by the National Library of Canada (NLC). The headings are established based on *AACR2* with NLC options that are not necessarily the same as the LC options. Although there is an agreement between LC and NLC to avoid duplication, considerable numbers of headings still seem to be established by both agencies, creating conflicts in the WLN authority file. These headings are changed to LC forms. French name headings from bilingual records ("Eglise catholique. Pape (1978– : Jean Paul II") are changed to English forms and cross-references are added.
9. *Other maintenance activities.* These include browsing through the authority file and correcting any errors found; examining key words linked to only one bibliographic record for possible typographical errors; reviewing the automatically replaced headings to check the validity of the cross-reference structure in the WLN authority file; and deleting authority headings to which no cross-references, notes, or bibliographic records are linked. Clean-up and updating of National Library of Medicine subject headings (*MESH*) are a likely project for the future.

Although these bibliographic database maintenance tasks follow na-

tional standards, local practices are also accommodated as institution-dependent data in WLN. The institution-dependent data appear only on the online displays, and COM and CD catalogs of the libraries using them. For example, a series not traced by LC may be traced if a library so desires. Locally defined topical subject headings are created to give additional access to materials when LC does not provide it. Access to academic dissertation collections and access by languages used in the works are two examples in this category.

Approximately 12,000 to 15,000 authority records are being updated each month. Since bibliographic and authority records are directly linked in the WLN system and global changes of bibliographic records through authority changes are possible, WLN estimates conservatively that authority headings in 30,000 to 40,000 bibliographic records are being updated every month. The catalog cards, magnetic tapes, COM and CD catalogs, and printed bibliographies produced for libraries reflect the latest bibliographic and authority data in the WLN database. Matching and deblinded cross-references and notes (i.e., the cross-references and notes that always refer to the headings used by bibliographic data in the catalog) are automatically included in COM and CD catalogs.

Authority Maintenance by WLN Member Libraries

Approximately 15 to 20 percent of authority changes are initiated by member libraries each month. All changes to authority records are reviewed by WLN staff to ensure the quality of the bibliographic database and a consistent authority structure, both of which are essential for the integrity of the database as a union catalog. The procedures for authority record changes are very simple, and all authority records (name, uniform title, series, and subject) can be changed by any member library at any time.

Members with language and subject expertise actively participate in particular areas of the authority file maintenance work. Libraries in Alaska are interested in Alaska-related corporate bodies and subjects; Canadian users often notice Canadiana headings conflicting with LC headings and problems with British royal family headings; Montana libraries seem to keep a careful eye on geological headings; school libraries notify any problems with AC headings; Catholic libraries are concerned with headings for the Catholic Church, saints, and liturgical works; and libraries doing retrospective conversion through WLN revise obsolete headings they discover in the authority file. Since all authority changes update the central bibliographic database, one library's efforts in authority work benefits all users of the WLN database.

Authority Control Using WLN: Washington State University Libraries' Experience

Washington State University Libraries

Washington State University (WSU), the state's land-grant university, has an enrollment of approximately 16,000. The university's library sys-

tem consists of seven individual libraries in the fields of humanities and social sciences, natural science, agricultural science, music, education, mathematics, and veterinary medicine, with a combined collection of 1.5 million volumes. A wide range of users including 14,000 undergraduate students, 2,000 graduate students, 1,500 faculty members, 2,500 staff, and the community at large rely on the libraries to supply information needs.

The technical services division is responsible for processing all of the library material added to the collections in each of the individual branch libraries on campus. The monographic cataloging unit of the technical services division, which consists of six professionals and eleven paraprofessionals, processes approximately 25,000 titles per year. The serials/documents unit, with three professionals and seven paraprofessionals, maintains the bibliographic records for approximately 40,000 serials, of which 20,000 are currently active. Even though processing of the Libraries' collection is done centrally, the technical services division tries to respond to the specific and unique needs of each branch library.

Use of WLN for Technical Services Automation

The WSU Libraries began to automate the technical services division in 1977, and the Western Library Network was chosen to automate the cataloging and acquisitions functions. The decision to select WLN as the bibliographic network to perform cataloging and cataloging maintenance was influenced by two sets of factors.[13] First were WLN's linked authority and bibliographic file structure, its input/edit cataloging features, and its philosophy of shared maintenance in accordance with national standards, which offer the libraries a very efficient and economical way to process materials.

Second, due to rising labor costs, cuts in staffing, and cuts in the libraries' budgets, the cataloging department saw a need to replace many manual procedures with less labor-intensive and more cost-effective automated processing. Shared maintenance of a bibliographic database was seen as an attractive way to solve some of the problems caused by dwindling resources. In addition, WLN treats its database as a union catalog for member libraries and makes great efforts to maintain its integrity with a policy of consistent authority file structure and of one bibliographic record per one manifestation of an item. This meant to WSU Libraries a clean and easy-to-use database from which to build its local online catalog.

WSU Local Online Catalog and Authority File

The WSU Libraries' local online catalog was implemented in 1981. Since the Libraries were already taking full advantage of the shared maintenance and input/edit features of the WLN system, it was logical to continue all catalog maintenance in the WLN database, downloading bibliographic records to the local online catalog via magnetic tapes. The WSU local system was deliberately designed without the capability of changing or upgrading bibliographic records in the catalog, given the capabilities of the WLN system.

By using the WLN online authority file, each heading entered in the

WSU local online catalog matches the WLN authority file. The linkage between the bibliographic and authority files in the WLN system means that every time a bibliographic record is used, it retrieves the latest forms of the authority headings linked to that record. When an authority record is corrected in the authority file, all bibliographic records attached to the authority record are also corrected. This constitutes a significant advantage in the WLN system design over that of other national networks.

Because all authority maintenance work done by WLN and member libraries, including the WSU Libraries, is transferred to the WSU online catalog in addition to headings established locally, maintaining a manual authority file has become redundant and unnecessary. WSU Libraries' policy is to adhere to the national standards by following closely *AACR2*, Library of Congress Rule Interpretations, and Library of Congress Subject Headings. Therefore, the Libraries decided to abandon the manual authority file and rely entirely on the WLN authority file.[14]

WSU Libraries' Share of Authority Maintenance Work

The staff at WSU Libraries concentrate on correcting and updating headings encountered during normal processing of materials in cataloging as well as in reference work. Examples include variant forms caused by typographical errors, and tagging errors and slight variations in form. Staff members make a special effort to update and eliminate incorrect forms of headings with which they are familiar or in which they have expertise, such as those for series acquired by the libraries or headings associated with Washington State University. Occasionally authority problems arise that are too large or too complicated for staff to correct. These are referred to WLN experts for correction.

In the cases in which it is more expedient for WSU Libraries staff to perform such maintenance work, the WLN authority staff serve as consultants and reviewers of the final updated product, which is transmitted electronically using the input/edit subsystem. Every authority change is reviewed at the network level to ensure that it follows network and national standards and is appropriate and correct in each case. If WLN staff have concerns or question the proposed change, they attach a message to the record and send it back to the originating library explaining their concerns. In this manner the network's high standards are maintained while the users are involved. This is the same method used to involve participants in the NACO Project.

Sharing authority work with WLN staff and other network members constitutes a considerable advantage, because it allows for efficient authority maintenance with less burden on financial and human resources for each member. It also ensures the quality and timeliness of the database—two equally important factors that should not be mutually exclusive.

Updating WSU Libraries' Online Catalog

The WSU Libraries receive biweekly a magnetic tape of MARC records from WLN for loading into the WSU online catalog. The tape includes new bibliographic records that the Libraries have input, bibliographic records

already existing in the WLN database to which the Libraries have added new holdings, and old bibliographic records already in the WSU online catalog that have been updated since the last MARC tapes were produced. The latter are records in which either the descriptive cataloging, the MARC tagging, the call number, or the authority headings are modified by WSU Libraries staff, other WLN libraries, or WLN. The database records replaced by new LC tapes are also in this category. Each tape contains approximately 6,000–8,000 bibliographic records, 60 to 70 percent of which are updated bibliographic records.

The WSU online catalog is designed with a program that replaces already existing bibliographic records in the catalog with later, more up-to-date versions of the same bibliographic records. This online design feature is necessary for taking full advantage of the shared maintenance work done by WLN.

A large proportion of the updated records contains modifications to authority headings. The close coordination of the MARC tape generation and loading procedures ensures that the authority headings on the bibliographic records in the WSU online catalog match authority records in the WLN authority file. When the tapes are loaded into the WSU online catalog, all the updates and changes done in the WLN database affecting bibliographic records to which the WSU Libraries have attached holdings are transferred to the WSU Libraries' online catalog.

The efficiency of this cooperative arrangement was demonstrated when an authority change affecting hundreds of headings and several thousands of bibliographic records was announced in the *LC Subject Headings Weekly List* no. 44, 1986 (Oct. 1986). This involved altering the subject heading "Near East" to "Middle East," both as a main heading and as a geographical subdivision. The WLN authority staff, with some help from members interested in this subject area, immediately began to convert the more than 1,000 authority headings involved, which in turn updated approximately 5,000 bibliographic records from the old form to the new form. All of the appropriate updated bibliographic records (i.e., those to which WSU Libraries have holdings attached) came on the next bimonthly MARC tape from WLN. When the tape was loaded into the WSU online catalog, all headings with "Near East" were updated to the new form "Middle East," thus preventing split files between the two forms in the online catalog. Of course, maintenance work must continue so that no bibliographic records using "Near East" will enter the WLN database in the future or the WSU online catalog via WLN MARC tapes. WSU Libraries staff, other WLN members and WLN staff continue the follow-up work as necessary. But for WSU Libraries, the only staff time expended for this clean up project so far was that of the person at the computing center who loaded the tapes into the online catalog.

The link between the authority file and the bibliographic file ensures that the form of the heading in the bibliographic record always matches the form of the heading in the authority file, which makes searching the catalog easier for users. A clean, up-to-date, but unlinked authority file can only show what form of heading a user should choose for a concept or an entity as an access point. It does not inform the user what form or forms

should be searched in the catalog to locate bibliographic records in order to retrieve the material in which the user is interested. Fortunately, WLN users do not have to deal with the problem caused by discrepancies between the authority file and the bibliographic file, as headings in the bibliographic records can be updated quite easily through global changes.

Retrospective Conversion Using WLN

Since 1980 WSU Libraries have been involved in retrospective conversion (RECON) of the card catalog, with WLN supplying MARC records. To date approximately 380,000 bibliographic records have been converted and added to the WSU online catalog. Since 1986 the WLN inputting service has been doing the WSU RECON at a rate of 2,000 bibliographic records per month.

Because the entire WLN database is constantly updated, the WLN MARC record for a very old catalog card already carries the latest form of a heading, e.g., "Middle East" instead of "Near East," or "Washington State University" instead of "Washington (State). State University, Pullman." When obsolete headings are discovered, global changes are initiated immediately. The records not found in the database are input by WLN, then go through the rigorous machine examination of headings before entering the database. If the headings match the see reference form, automatic flipping to the authorized form occurs as described earlier. Obsolete or incorrect forms of headings not corrected by the automatic validation process show up on the weekly New Authority Headings list. This list is examined by WLN staff, who correct, upgrade, and create new *See* references. WSU staff also monitor new authority headings generated during the RECON input project and make corrections whenever necessary. By integrating authority updating within the retrospective conversion project, WSU Libraries will avoid engaging in an expensive follow-up project to clean up obsolete authority headings later. During the nine years the Libraries have been involved in RECON, the headings in the WSU online catalog have remained current.

WSU Libraries' success in using the WLN authority file to keep headings in the local online catalog current is due to the Libraries' utilization of the entire integrated WLN system and, most importantly, sharing with other libraries the task of authority maintenance. Since each member library's authority work updates the central database, not just its own local catalog, no resources are wasted in redundant efforts. Rather, combined resources from many libraries are used to resolve big and expensive authority conflict problems no single library can afford to perform. The result is the high-quality, up-to-date bibliographic information that the WSU Libraries users enjoy.

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2. *Library of Congress Descriptive Cataloging Manual,* N 1: (Rev. Dec. 1985).
3. *Cataloging Service Bulletin,* 41:83 (Summer 1988).
4. Many vendors provide authority control processing services to libraries wanting to update headings in their catalogs. Different degrees of service are available based on

update headings in their catalogs. Different degrees of service are available based on each library's automation plan and availability of financial resources. In general, they include flipping headings to *AACR2* form; expansion of obsolete abbreviations; updating of period, geographical, and general subdivisions; generation of cross-references and notes; and revising obsolete headings that split into two or more headings. For more detailed information on some of the vendor-provided authority processing services, see Blackwell North America, Inc., *Authority Control Services* (Lake Oswego, Oreg.: Blackwell, Rev. 88 Feb.); Marcive Inc., *Authorities Processing* (San Antonio, Tex.: Marcive Inc., AC1187); Utlas, *Batch Authority Control: Services and Systems, Description no. 3* (Toronto: Utlas International Canada, Mar. 1987); and Autographics, Inc., *Authority Control System* (Pomona, Calif.: Auto-Graphics, Sept. 1987); WLN, *When Quality Counts: The WLN MARC Record Service (MARS)* (Olympia, Wash., WLN, 1990).

5. Under licensing agreements, WLN software is replicated in several national networks and academic libraries. They include the National Library of Australia, National Library of New Zealand, National Library of Singapore, the British Library; the University of Cincinnati and University of Missouri; Brown University; and the University of Illinois at Urbana-Champaign (UIUC). For a detailed description of the UIUC's use of WLN software in combination with their circulation system, see Michael Gorman and others, "Special Section: In Depth—The Online Catalogue of the University of Illinois at Urbana-Champaign," *Information Technology and Libraries* 4:306–51 (Dec. 1985).
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8. For a more detailed description on the WLN authority control features, see Fumiko Coyne, "Automated Authorities Maintenance at the Western Library Network," *Technical Services Quarterly* 5, no.1:33–47 (1987).
9. It contains LC's minimal level cataloging MARC records, which include items that LC judged not worth the expense of full cataloging or those for which full cataloging is highly unlikely due to large arrearages. Records of most microform monographs and microform collections cataloged by LC are in this category.
10. Provides MARC records created by the Boston Public Library for art exhibition catalogs and other art-related publications.
11. For a more detailed description, see Western Library Network, *Technical Bulletin*, no. 258 (Olympia, Wash.: WLN, Rev. Sept. 23, 1988).
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13. Ruth Patterson Funabiki, Ingrid Mifflin, and Karen Corlee, "Use of the WLN Authority Control System by an ARL Library," *Library Resources & Technical Services* 27:391–94 (Oct./Dec. 1983).
14. The WSU Libraries online catalog currently does not have an authority file. This is a major drawback in the online catalog, which the WSU plans to correct in the future by redesigning the catalog. In this plan it is hoped that the WSU Libraries will continue to maintain the authorities using WLN and to download all authorities updates from WLN, preferably on a daily basis, synchronized with a direct downloading of the bibliographic records from WLN.

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Notes on Research and Operations

Use of the Library Catalog by Students at Ogun State University, Nigeria

S. A. Bilesanmi

The ways in which students make use of the library catalog at Ogun State University, Nigeria, are examined. The extent of student use of the catalog is also assessed. Results indicate that 65 percent of the students make no use of the catalog. Reasons that students fail to make effective use of the catalog are offered.

The Ogun State University Library was established in 1983. Though the university is relatively young, the university library has built up a collection of materials in all fields of human endeavor numbering more than 30,000 volumes. The university has its main library and the law library at its Ago-Iwoye campus. It also has two other branches, the Ijebu-Igbo annex library for arts and social management sciences and the medical library at Sagamu. Though each of the branch libraries has its own catalog, the catalog at the main library serves as a union catalog, since records of all materials are kept in the main library.

The library often is called the heart or nerve center of a university, and a large amount of money is spent for purchasing books and other library materials. This expenditure is not justified, however, unless the library is fully utilized.[1] The full utilization of library materials is made possible through the use of the catalog, which saves the time of the library users. A catalog is usually regarded as an essential key to the library's stock, although it has been viewed by some people as a sacred cow. Grose and Line have referred to it as a white elephant.[2] Experts claim that the catalog should show what is available in the library, and where it is shelved, by providing an entry under every likely access point.[3]

The extent of the use of library resources depends greatly upon the quality of the library catalog. As Kumar and Kumar put it, "A comprehensive catalogue enhances the reputation of a library. On the other hand, an incomplete or poor catalogue mars the reputation [and] misguides not only users but also reference librarians."[4]

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Studies have been done in the use of the library catalog both in advanced and developing countries.[5,6] A survey was carried out at Cochin University of Science and Technology on the use of the catalog, which revealed that 51 percent of the students who participated in the survey were not consulting the catalog at all.[7] Omoerha, writing on the use of the library catalog by the students of the University of Benin, stated that "although the catalogue still represents the most reliable guide to the library's stock, there are strong indications that users prefer going straight to the shelves, even when the author and title of a book are known."[8] He asserted further that the students seemed to prefer shelf browsing as a search strategy, and once they located a particular book at a point in the shelf they always went there whenever they needed that book or one on a similar subject.[9] Kumar and Kumar, writing on the progress in library cataloging, asserted that "even today, we do not know enough as to how users use a catalogue" and that "studies in depth need to be carried out to determine the approach of users in various types of libraries."[10]

The focus of this study was to determine how students make use of the library catalog at Ogun State University. The extent of their use of the catalogs also is assessed. Some reasons for the failure to make effective use of the catalog are offered.

The Ogun State Study

A questionnaire was used to survey student catalog use. Respondents' names were not required to encourage them to give frank and accurate answers. Questionnaires were distributed at the circulation desk. Respondents were expected to fill out the questionnaires and return them to the circulation desk. In all, 250 questionnaires were distributed; 200 were returned, for an 80 percent response.

Answers were sought to the following questions:

1. Do you make use of the library catalog, and if not, why not?
2. Which of the library catalogs (author/title or subject) do you use and why do you prefer it?
3. Did you attend the library orientation program for freshmen, and if not, why not?
4. Is the location of the library catalog satisfactory?
5. Do you always find the book(s) you want using the library catalog?
6. Do you consult with library staff when you are having difficulty using the library catalog, and if not, why not?
7. Do you have any useful suggestions regarding the improvement of the library catalog?

Findings

Extent of catalog use: Of the 200 students who responded, 65 percent (130) indicated they did not make use of the library catalog. The reasons included that they preferred to go directly to the shelves because the catalog is difficult to understand and that going through the catalog is a waste of time.

Use of author/title vs. subject catalogs: Twice as many students made use of the author/title catalog as the subject catalog. The author/title group

said that lecturers recommended books by giving either the name of the author and/or the title of the book in question. Those who favored the subject catalog believed it is easier to search and helps readers find books of which they had no previous knowledge.

Attendance at library orientation: The survey revealed that 35 percent of the students attended the library orientation for freshmen, while 65 percent did not attend the library orientation.

Reasons for failing to attend the orientation were late admission to the university, lack of knowledge about the orientation, and conflict with scheduled registration in their departments.

Eighty-five percent of the respondents believed that the orientation was a good thing, while 15 percent did not. The latter group said they were not against the organization of the orientation but the time at which it was scheduled.

Location of the library catalog: Most students (90 percent) found the location of the catalog satisfactory, but a small group (10 percent) did not.

Finding books using the library catalog: Thirty-five percent indicated that they found the books they wanted, while 65 percent said that they did not. Students claimed that when they got to the shelves where the book was supposed to be, they did not find it. Some believed books were misplaced frequently by other students.

Contact with library staff when having difficulty: Seventy percent of the students did not contact the staff when they had difficulty. They were not aware that the staff could be contacted; 30 percent indicated that they contacted library staff when they needed help.

Improvement of the catalog: Fifty-five percent of the respondents made suggestions for improvement, including asking that a staff member be in charge of the catalog and that the students be introduced to the person during the orientation. They also called for regular revision of the catalog by staff in order to correct errors and misfiling.

Recommendations

The data clearly show that students at Ogun State University are not using the library catalog as fully as they might. These results are not inconsistent with previous studies of library catalog use. The following recommendations are proposed, based on this study:

1. The time scheduled for the library orientation should be separated from other introductory activities, and a specific time should be allocated to freshmen for orientation and registration for the library. The survey suggested a large number of students received late admission, so the library orientation should be scheduled for after registration.
2. Regular maintenance should be carried out on the catalog by library assistants and attendants and supervised by a library officer.
3. The university library should prepare a handbook on library use for new students, containing information regarding the catalog.
4. A staff member should be assigned to the catalog and introduced to the students during the orientation.
5. Students should be encouraged to request assistance from library staff when they are having difficulty searching the catalog.

6. Guides should be provided to the catalog to show users how to find needed information.
7. More library assistants should be provided in the technical services division to ensure that catalog maintenance can be kept up to date.

It is hoped that if the recommendations proffered are well taken, students will be more encouraged to use the library catalog and expect to succeed in finding what they need.

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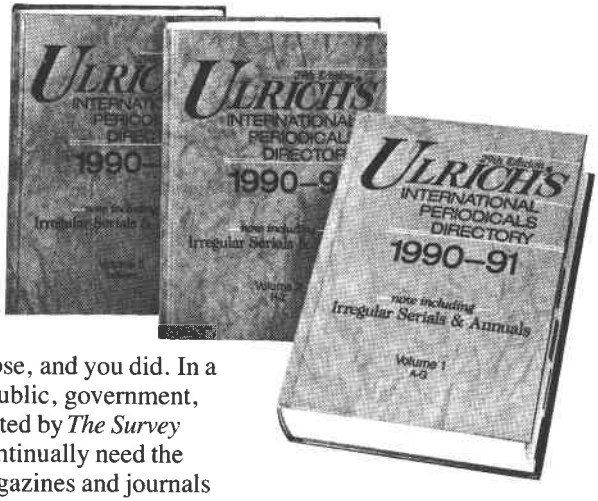

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1990 Annual Reports

ALCTS 1989–90 Annual Report

This is the first ALCTS annual report. For a new division, ALCTS was very active building on its nearly thirty-five years of experience as RTSD.

ALCTS took a leadership role in three major issues confronting ALA members during the past year: serials pricing, bibliographic record licensing, and preservation.

- By garnering support from across the association ALCTS promoted successfully through the ALA Council the Resolution on Free Scholarly Discourse expressing the concerns of members with the use of litigation to discourage the publication of comparative cost studies. We addressed issues of serials pricing through the Report of the Economic Access to Library Materials Committee approved at the summer conference and the electronic *Newsletter on Serials Pricing Issues* of the Publisher/Vendor-Library Relations Committee.
- Part of the ALCTS National Libraries Reporting Session at Midwinter was devoted to discussing the Library of Congress MARC licensing proposal with members in an open forum. Responding to the hearing, ALCTS established an ad hoc committee with association-wide representation to work with Henriette Avram on exploring alternatives to the proposed licensing agreement, including the lowering of LC's cataloging costs and advising LC on the best methods for recovering costs from MARC users to assure the long-term availability of the MARC tapes.
- ALCTS celebrated ten years of the Preservation of Library Materials Section and its significant contributions to increasing awareness of one of the most serious problems confronting librarians today while developing important solutions to the problems. We created the "Going, Going, Gone. . ." program funded by an ALA World Book Goal Award and published posters, pamphlets, and bookmarks for libraries to promote awareness of preservation problems facing libraries; the posters and pamphlets were used in the ALA President's Preservation Forum at the Midwinter Meeting. We presented with the Library Administration & Management Association (LAMA) for Council's endorsement the Resolution on Permanent Paper, which provides a plan for the association's continuing active support toward the increased adoption of permanent paper. We contributed a statement on preservation prepared by Sally Buchanan (University of Pittsburgh) to ALA's promotional booklet for the White House Conference on Li-

braries and Information Science. We published a revised edition of *Preservation Education Directory*, compiled by Christopher D. G. Coleman, for the PLMS Education Committee; this directory was the first project undertaken by PLMS when it was formed as a section ten years ago and continues to be an important service to librarians interested in preservation.

The Board of Directors approved the first ALCTS Five-Year Financial Plan, the first ALCTS Strategic Long-Range Plan, and established an ALCTS endowment. ALCTS provided continuing education through a program of outreach with institutes on collection development (Chicago), *AACR2* (Oakland and Cincinatti), and library binding (Portland). A new division committee was established, the Committee on Research and Statistics.

Administratively, it was a very important year. The experiment in shared staffing with LAMA to identify areas of mutual cooperation and benefit was declared a success and is being continued indefinitely. New editors for the *ALCTS Newsletter* (Ann Swartzell, University of California, Berkeley) and *Library Resources & Technical Services* (Richard P. Smiraglia, Columbia University) were appointed. Staff size grew to provide better support for publications, continuing education and management by adding two new positions to the division's headquarters staff. Headquarters staff in addition to Karen Muller, Executive Director (half-time), and Yvonne McLean, Program Assistant, now include Alex Bloss, Deputy Executive Director, Beatrice Calvin, Administrative Assistant (half-time), Marie Rochelle, Administrative Secretary, and Andrea Wiley, Secretary.

The Association for Library Collections & Technical Services faced a number of problems in 1985, not the least of which was a financial crisis. During the past year, it has been a delight to see the organization restore its publications to their former sizes and frequencies; design a new logo and membership brochure, new stationery, and new exhibit banners; reinstate a number of membership programs and develop some new ones, such as the ALCTS Bonus Bucks for new institutional members; undertake a campaign using bright-colored buttons and rhymes to teach the association how to pronounce our new name; and, plan a division-wide social activity (the ALCTS Birthday Cruise) for the first time in five years.

Presiding during the first year of a new organization, especially one as old and grand as ALCTS, has been a real challenge. But in the end when I try to sum up the year, I realize that it isn't the president at all who makes or breaks the year, it's the membership and the terrific headquarters staff. When I set out on this task two years ago, I didn't know we would change our name, find not only financial stability but the opportunity for funding program growth, and for taking the leadership in some of the major issues confronting librarianship in 1989–90. I just wanted us "to feel good about ourselves"—my modest goal presented to the other division vice-presidents at the Division Leadership Program in September 1988—and from my view at the top, it seems we do! Thank you for giving me the opportunity to participate.—*Nancy R. John, President, 1989–90.*

Cataloging and Classification Section 1989–90 Annual Report

CCS Executive Committee. The Cataloging and Classification Section completed a dynamic year of operations in which several major issues in the library field were of direct interest to the section: the development of a subject code and improved subject analysis, MARC licensing, multiple versions, and the MARC format for classification.

CCS sponsored a provocative and well-attended program at the Annual Conference, "The Subject Code: Do We Have One? Do We Need One?" The program was planned with the assistance of both the Subject Analysis Committee and the Committee on Cataloging: Description and Access.

The section produced two publications: *Guidelines on Subject Access to Individual Works of Fiction, Drama, Etc.* and *Cataloging for Children: A Selective Bibliography.* The guidelines were published by ALA in June 1990 as a separate entity, and were developed in direct response to access issues brought to the attention of the section by the Public Library Association membership. The cataloging bibliography appeared in *ALCTS Newsletter* 1:4 (1990).

In response to strong membership interest in research, the CCS Executive Committee instituted a new discussion group, the Cataloging and Classification Research Discussion Group. The CCS Executive Committee also requested that the *ALCTS Newsletter* reinstitute the column on research. CCS reaffirmed its interest in an award for cataloging and classification research.

The CCS Executive Committee also considered international issues. The section has five members on IFLA Committees whose nominations have been sponsored or endorsed by CCS, and who report back to CCS on issues of concern in IFLA. The CCS Executive Committee reviewed "Guidelines for Librarians Interacting with South Africa" with the comments of the Committee on Cataloging: Asian and African Materials.

Finally, the CCS Executive Committee completed a self-study of the section under the coordination of the Policy and Research Committee.

Committees, Discussion Groups, and Interest Group. The Cataloging of Children's Materials Committee submitted a bibliography on cataloging children's materials, and initiated planning of a series of institutes on *DDC 12th Abridged Edition.*

The Committee on Cataloging: Asian and African Materials reviewed the "Guidelines for Librarians Interacting with South Africa" and advised the CCS Executive Committee on action.

The Committee on Cataloging: Description and Access deliberated the topic of multiple versions. The concept of a two-tiered cataloging record as a solution to multiple-version issues was discussed, and the committee has begun work on a set of guidelines for multiple versions. CC:DA also discussed and endorsed a report on the future of the rule revision process. CC:DA reviewed the task force report on place names, and considered rewording of the definition of "kit," "toy," and "game."

The Committee on Education, Training and Recruitment for Cataloging

developed a proposal for a 1991 program on cataloging practica and discussed the image of catalogers and the "deprofessionalization" of cataloging.

The Margaret Mann Citation Award Committee selected Ronald Hagler as the 1990 recipient.

The Policy and Research Committee prepared a review of the Cataloging and Classification Section, prepared guidelines for meeting scheduling, and discussed ways of encouraging research in cataloging and classification. The committee recommended the formation of a new discussion group on research and the reinstitution of the research column in the *ALCTS Newsletter.*

The Subject Analysis Committee forwarded *Guidelines on Subject Access to Individual Works of Fiction, Drama, Etc.* for publication, and recommendations on current terminology in *LCSH.* The idea of a subject code was explored by the committee, and SAC sponsored a discussion of the concept following the CCS program on the subject code. SAC continued to review the MARC format for classification and monitor MARBI discussions on the format. The committee appointed task forces to study priorities for *DDC 21*, subject access to AV, and the NISO standard for monolingual thesauri. Task force work continued on the structure of LC authority files and the display of subject headings in the online catalog.

CCS discussion groups and interest groups provided a forum for general membership to participate in discussion of critical cataloging and classification issues. The Catalog Management Discussion group discussed dealing with the paper generated by the catalog maintenance process. The Catalog Norms Discussion Group explored the relationship between librarians and paraprofessionals, and the changing environment for the original cataloger. The Copy Cataloging Discussion Group discussed copy cataloging in acquisitions and general production standards in copy cataloging. The Heads of Cataloging Discussion Group addressed multiple versions and the closing of catalogs. The CCS/MAGERT Discussion Group focused on photocopies and macroreproductions of maps. The LITA/ALCTS CCS Authority Control Interest Group held a number of well-attended sessions on various issues related to authority control.

The Cataloging and Classification Section is satisfied with the accomplishments of the past year and looks ahead to an exciting agenda. The section prides itself on being able to meet the present needs of practitioners while also focusing on theoretical concerns and long-range issues. Future CCS program plans include a good mix of topics with practical, theoretical, and futuristic content: cataloging practica, *DDC 12th Abridged Edition, AACR2R,* cataloging and classification research, and the redefinition of the role of subject cataloging.—*Joan S. Mitchell, Chair, 1989–90.*

Council of Regional Groups 1989–90 Annual Report

The Council of Regional Groups (CRG) continued to provide a vital link between ALCTS and state/regional collections and technical services or-

ganizations during 1989–90. The Council benefitted all groups concerned through its increasingly proactive role as a conveyor of information and communication and as a means by which affiliates may participate in ALCTS. The ALCTS Board's adoption of mission and priorities statements (formulated by its Strategic Long-Range Planning Task Force) at the 1990 Annual Conference in Chicago has reaffirmed the necessity for this link between groups and has empowered CRG to continue and strengthen its role as that link.

The Collections, Automation, Preservation, Technical Services and Acquisitions in Nevada (CAPTAIN) interest group of the Nevada Library Association was approved and welcomed as the thirty-eighth ALCTS/CRG affiliate by the ALCTS Board at the 1990 Midwinter Meeting in Chicago. The CRG Affiliate Recruitment Committee (ad hoc), which was formed following the 1989 Annual Conference in Dallas, worked toward identifying additional prospective affiliate groups and compiled a list of at least five organizations that will be contacted during 1990–91.

Another CRG committee, the Speakers' Bureau Committee (ad hoc), is establishing criteria for and formulating a speakers' bureau listing of ALCTS leaders who are willing to speak and present programs for CRG affiliates at no cost except expenses. Previous versions of this list had been incomplete and informally prepared by CRG officers, but these listings were of use to affiliates with small conference budgets. The committee plans the distribution of its newly compiled listing in early 1991.

CRG business meetings, held at ALA Midwinter and Annual Conferences, have provided affiliate representatives with important ALCTS information from CRG officers and representatives in ALCTS division-level committees. This presentation of "capsulized" news enables affiliate officers to understand the work of the Division and to offer comments on that work that is then relayed to the appropriate group, such as the ALCTS Board (the CRG Chair and Vice-Chair are both Board members) or ALCTS committees with CRG representation.

More opportunities for current and past affiliate officers to become personally involved in ALCTS business have been requested by CRG officers, and the ALCTS Board has voted to place a suggested bylaws change on the 1991 ballot. This revision, if approved, would establish the office of CRG secretary, which would be a two-year position elected by the entire ALCTS membership. More CRG representation on ALCTS division-level committees has also been requested and will commence after the 1991 Annual Conference.

CRG also provides opportunities for affiliates to cooperate with each other and with ALCTS. Whenever affiliate cosponsorship of an ALCTS institute or workshop is sought, CRG consults with and encourages affiliates to participate. The "round robin" section of CRG business meetings, in which affiliate officers report on recent and future conferences and other programs that they have sponsored, communicates topics of interest on the state/regional level to ALCTS (for programming and publications use) and to the other affiliates, who may consider these ideas for possible future use.

The Council of Regional Groups is committed to strengthening the ties between the Division and state/regional groups and is currently formulat-

ing short- and long-range goals and objectives that will accomplish this. Such a close relationship will inevitably result in higher ALCTS membership among affiliate groups as they realize the overwhelming benefits of that membership, and ALCTS will also benefit in increased affiliate officer participation in ALCTS business. Affiliates will benefit through ALCTS' attentiveness to their needs and willingness to help in areas such as program planning. The Council's job is just beginning as a proactive force in ALCTS, but, with ALCTS' support and vision of CRG as a vital institution, CRG's mission will be very successful in the future.—*Dorothy K. McKowen, Chair, 1988–90.*

Preservation of Library Materials Section 1989–90 Annual Report

At the Annual Conference in Chicago, the ALCTS President's Program entitled "Preservation: The Common Ground" celebrated the tenth anniversary of the Preservation of Library Materials Section and recognized the growing importance of preservation to all librarians. Sally Buchanan and Helga Borck, representatives from PLMS and RLMS, spearheaded the program planning, which featured keynote speeches by William Welsh and John Feather on the need and relevance of preservation. Breakout sessions sponsored by ALCTS, ACRL, LAMA, LITA, PLA, RASD, AASL, and ALTA followed, covering such topics as optical technology's potential for preservation, planning and implementing a preservation/conservation program, preservation techniques for nonbook materials, a report from the Commission on Preservation and Access, preservation issues in technical services, and coping with existing facilities to meet preservation needs.

In the preconference "Preservation Issues in Collection Management," sponsored by PLMS and the Collection Management and Development Committee, speakers described criteria and options for making decisions about deteriorated materials. Participants learned about the impact of new technologies, issues, and strategies for implementing preservation programs, and new challenges for the 1990s while gaining practical experience in making preservation decisions. The PLMS program "Automation & Preservation: Bring on the Empty Horses!" identified current and future ways in which automation is and should be used to integrate preservation decision making into the automated library workplace. Not every program about preservation was sponsored by PLMS; other programs highlighting preservation concerns were: "Preservation Programs Affecting the Nation," "Preservation of Electronic Information," and "Preservation of Slavic Materials and Special Collections."

As part of its tenth anniversary celebration, PLMS shared a double booth with ALCTS, which highlighted audiovisual presentations for preservation education. To promote kinder, gentler book handling, book snakes (available in four different colors) were sold at the ALA Store for $15.

As a result of an investigation by PLMS members into enlisting ALA

support for the distribution of the Association of Research Libraries (ARL)'s alkaline paper packet, ALA contributed $2,000 to "Preserving Knowledge: The Case for Alkaline Paper" and supplied ARL with 1,000 copies of the brochure "Going, Going, Gone." PLMS also established a task force to pursue having Maurice Sendak design a poster to promote the preservation of library materials.

Coinciding with the celebration of PLMS' tenth anniversary was the implementation of the restructuring of PLMS, which called for the formation of new committees and discussion groups and the reconfiguration of others. The quality of the work done by the task force charged with examining the structure of PLMS was acknowledged when, at the 1990 Midwinter Meeting in Chicago, the ALCTS Board of Directors agreed "that, in view of the recent reorganization of the Preservation of Library Materials Section, the current Planning and Research Committee review of PLMS be considered complete." Fine-tuning of the restructuring continued through the year. The PLMS Bylaws were amended to make the representative to the ALCTS Budget and Finance Committee an ex-officio member of the PLMS Executive Committee, and the Publications Subcommittee was reorganized as a full committee.

PLMS committees were very active last year. The Policy and Planning Committee prepared a list of preservation research needs that has furthered activity on many fronts, including action by the Commission on Preservation and Access; established a task force to develop a paper for White House Conference delegates; approved a planning schedule whereby section goals will be reviewed at the annual meeting and committee goals will be developed by each committee and reviewed by the Policy and Planning Committee at the Midwinter Meeting; and examined the reporting mechanism for liaisons and representatives. The Education Committee was instrumental in the success of the preconference and programs sponsored by PLMS. The committee also wrote a tipsheet to accompany "Going, Going, Gone" materials for sale by the ALA Graphics Department; published a revised *Preservation Education Directory*; and provided input for the next revision of the *Core Collection in Preservation* bibliography. Educational events in the planning stages include: Library Binding Regional Institute, Pittsburgh, September 1990; Disaster Preparedness Institute tentatively planned for spring 1991; "Knowing the Score: Preserving Collections of Music," 1991 Annual Conference; program on Statewide Preservation Programs, 1992 Annual Conference; and Preservation Administrators Institute, fall 1992. The Publications Committee reviewed its charge and how to evaluate documents, and decided that committees would be responsible for any content revision of documents. The committee also decided that work on the nonprint media leaflets should be discontinued because they are no longer timely and because a similar project is under way outside of ALA. The Physical Quality and Treatment of Library Materials Committee proposed a preconference for 1992 called "Library Buildings and Preservation: Design and Planning Considerations." Reports were given on collection surveys and on guidelines for book repair. The Preservation Program Management Committee met for the first time this year. It reviewed and amended its charge, established priorities for future agenda items, and made assignments. The Exec-

utive Committee oversaw the implementation of the PLMS restructuring, dealt with action items, and discussed Association and Section issues.

PLMS discussion groups fulfilled their function of providing a forum for discussion admirably last year and generated many useful ideas that were taken to PLMS committees or other bodies for action. The RLMS/PLMS Discussion Group featured reports from SOLINET, CIC, ARL, NEDCC, IFLA, LC, RLG, and CPA. The theme of the Midwinter Meeting of the Preservation of Library Materials Discussion Group was "New Programs, Old Problems, Creative Solutions." A panel provided an introduction to the development of new programs, highlighting key program elements. The agendas for the Preservation Administrators Discussion Group (PADG) meetings included mass deacidification, comprehensive preservation projects, a research agenda for library preservation, staffing challenges, national preservation programming, priorities for conservation treatment, an electronic mail list of PADG members, a review of PADG, and round robins on preservation programs. The Preservation Education and Outreach Discussion Group met for the first time at Midwinter to discuss the purpose of the group and future topics. The subject for the annual meeting was how to control copyright and plagiarism, with an emphasis on the handouts and information distributed by many libraries, regional networks, and field service programs. The Physical Quality and Treatment of Library Materials Discussion Group covered the need for good quality in-house book repair programs, including "show-and-tells" of repair techniques such as rebacking. The Librarian/Vendor Relations Discussion Group covered such topics as the glossary publication, a "start-up" archival quality repair kit, the need for microfiche envelope standards, and the future of the group. The Library Binding Discussion Group viewed the new film *Library Binding: A Shared Responsibility, a Collaborative Effort*, and featured a panel of people who had attended the Library Binding Institutes in Atlanta and Portland.

Thanks to this year's executive committee: Sherry Byrne, Past Chair; Margaret Child, Vice-Chair; Janet Gertz, Secretary; Wes Boomgaarden, Member-at-Large; Lorraine Olley (LRTS Editorial Board); and Karen Muller, ALCTS Executive Director; and to all the committee and discussion group chairs. They have done a superlative job of helping PLMS make a smooth transition to its new structure, and of keeping PLMS responsive to the needs of its members and of the preservation field. My thanks as well to Alex Bloss, ALCTS Deputy Executive Director, for answering a multitude of questions and simply making things run smoother. Finally, congratulations to Lisa Fox, who joined the PLMS Executive Committee as the Vice-Chair/Chair-Elect for 1990–91.—*Connie Brooks, Chair, 1989–90.*

Reproduction of Library Materials Section 1989–90 Annual Report

Over the past year, RLMS has worked to accomplish the goals set forth at the Dallas conference, namely, to continue the internal section review and to increase activity and visibility by developing programs, educational op-

portunities, and products in areas of interest to section members.

RLMS held a very successful preconference on Bibliographic Control of Microforms at the Chicago Annual Conference. The one-day session, at which participants examined current developments and issues in this important area, was cosponsored by CCS. RLMS also participated in planning for the 1990 ALCTS President's Program ("Preservation: The Common Ground") through the section Chair, who was cochair of the planning committee for the program. Planning continued for the 1991 Atlanta conference as well, where RLMS will sponsor a program on "Managing Library Photocopying in a Digital Age."

The ongoing section review is proceeding under the guidance of the Policy & Research Committee. A proposal to add two members-at-large to the Executive Committee (there is currently only one member-at-large) has been approved by the section's membership and will be implemented next year. Plans to establish an Education Committee are also going forward. This new committee will, among other responsibilities, absorb the duties of the Ad Hoc Committee on Regional Programs, which will be disbanded. The Publications Committee will become a standing subcommittee of the new unit.

RLMS committees continued to pursue topics of interest to members this year. In addition to its work on the section review, the Policy & Research Committee investigated ways of monitoring and disseminating information about research-in-progress in reprographics. The Bibliographic Control of Microforms Committee undertook a survey of libraries with experience in cataloging microform sets, and recognized the efforts of publishers who provide cataloging data for their products. The Copying Committee established a task force to work on developing standards for preservation photocopying and pursued revision of RLMS Circular #4, "Tips on Operating Copiers." The Committee on Electronic Imaging Technology, which provides a forum for discussion of new and emerging technologies, is investigating areas of common interest and possible cooperation with LITA. The Standards Committee undertook an annual review of the Association for Information and Image Management's Preservation Standards Set and continued to work on guidelines for preservation microfiche.

The RLMS Discussion Group continues to draw participants to discussions of available and upcoming technologies, while the Public Service Managers of Microform Facilities Discussion Group explores topics of interest to those with service responsibilities for microform collections. Finally, the RLMS/PLMS Joint Reporting Session provides a single forum for reports of interest in both reprographics and preservation.

In short, RLMS is continuing to explore and expand its coverage of issues in reprographics, reaching out to ALCTS members and others with interest in this field. Incoming Chair Shirley Leung and newly elected Vice-Chair Debra McKern will guide these valuable efforts in the coming year.—*Helga Borck, Chair, 1989–90.*

Resources Section 1989–90 Annual Report

The Resources Section accomplishments fall into three primary catego-

ries: continuing education, publication, and organizational activities.

"The Guide to Written Collection Development Policies," a revision of an earlier publication by the Collection Management and Development Committee, was published in 1989. During the 1989–90 year hearings were held for two additional Collection Management and Development guides. "The Guide to Budget Allocation for Information Resources" was approved at Midwinter by the Executive Committee subsequent to the hearing and forwarded to the ALCTS Publications Committee for final approval. "The Guide to the Review of Collections: Preservation, Storage and Withdrawal" was approved by the Resources Section Executive Committee at the Annual Conference 1990 and was forwarded to the ALCTS Publications Committee. It is anticipated that both these guides will be published within the next six to nine months. The third volume of the "Selection Tools" series, also a Collection Management and Development Committee project, is titled "Selection of Library Materials in Area Studies, Part I," and appeared at the end of June 1990.

Other guides that are in various stages of draft, but not yet ready for the formal hearing stage include: Guide to Acquisition of Out of Print Material and Guide to Preservation Concerns of the Acquisitions Department, Guide to Acquisition of Non-Traditional Materials and Financial Management (under the aegis of the Acquisitions Committee). "Statistics for Managing Library Acquisitions" by Eileen Hardy, a project of the Acquisitions Committee, was published in 1989.

The Library Materials Price Index Committee continues to produce price indexes for the *Bowker Annual.* In addition to price information about books, periodicals, serial services, nonprint media, the Committee is investigating the possibility of producing a foreign periodicals price index.

In August 1990 a successful regional Collection Management and Development Institute was held in Chicago, A number of regional institutes are being planned by Resources Section committees for 1991. The Collection Management and Development Committee is finalizing plans for an institute on Collection Development for the Electronic Library based on the prototype held at Cornell University this April. A Business of Acquisitions Institute is scheduled for June 1991; a regional basic Collection Management and Development Institute is scheduled for August 1991; and a preconference on the challenges of the dual roles of the collection development/public services librarian cosponsored with the RASD Collection Development Section will be held before the Atlanta Annual Conference.

Discussion groups are one of the ways that Resources Section fulfills its educational mission. At the Annual Conference in 1990 the Resources Section approved two new discussion groups: Acquisition Topics for Large Public Libraries and Acquisitions Administrators Discussion Group. An Ad Hoc Committee on the National Shelflist Count, which developed out of Chief Collection Development Officers of Large Research Libraries, proposed to Resources Section at Midwinter that it become a standing committee of the Section. That proposal was provisionally accepted by the Executive Committee at its Annual Conference meeting.

As the workload of Resources Section committees grows and discussion groups, subcommittees, and full committees multiply, it had become ap-

parent that Resources should consider an alternative structure that would better serve its needs. A proposal was made to the ALCTS Board in 1989 that the Resources Section divide into two sections: one for Acquisitions and one for Collection Management and Development. The proposal is being considered in the ALCTS Organization and Bylaws Committee.—*Cecily Johns, Chair, 1989–90.*

Serials Section 1989–90 Annual Report

The Serials Section used 1989–90 productively to support librarians and librarianship. Administrative activities were conducted by the Executive Committee, the Nominating Committee chaired by Rian Miller-McIrvine, and the Policy and Research Committee Marlene Heroux, and involved a continuing review of Section committees; extensive liaison with other ALA units, NASIG, and IFLA; and review of the ALCTS mission statement.

The heart of the Section lies with issues of bibliographic control, access, and standards, which were pursued by the Committee to Study Serials Cataloging, the Committee to Study Serials Standards, and the Committee on Union Lists of Serials. The year's issues included continuing work on SISAC standards, especially for the serial article identifier and electronic ordering, and the definition of bibliographic guidelines for multiple versions and serial uniform titles.

Outreach activities included programs, publications, education for serials librarianship, and awards. The Serials Section program "Access to Serials: Exercises in Collaboration," featured David Cohen, Rebecca Lenzini, and Clifford Lynch, addressing the impact of electronic access to journal citations on serials bibliographic control and service. Publications under development include guides and bibliographies on serials processing, a serials acquisitions glossary, and an evaluation of serials vendor performance being prepared by the Acquisitions Committee or the Education Committee. The Education Committee also worked on syllabi for course segments on serials librarianship. The Research Libraries Discussion Group tracked a number of current issues in both its Midwinter and Annual Conference discussions.

The Bowker/Ulrich's Serials Librarianship Award Committee selected Jean Cook as the award's 1990 recipient, in recognition of her distinguished work and many contributions. Journals foolish enough to permit title changes took their hits from the Worst Serial Title Change of the Year Committee, which made the awards with its usual flair.

Thanks to the Executive Committee: Elaine Rast, Vice-Chair/Chair-Elect; Jim Cole, Secretary; Doris Bradley, John Riemer and Odette Shepherd, Members-at-large, Marlene Heroux, Policy and Research Committee chair, and Minna Saxe, LRTS Section Editor. Thanks also to past Chair Alex Bloss, for assistance from the office of the ALCTS Deputy Executive Director. Congratulations to newly elected Vice-Chair/Chair-Elect Suzanne Thomas and Member-at-large Julia Blixrud.—*Suzanne Striedieck, Chair, 1989–90.*

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1990 Division/Section Awards

The Esther J. Piercy Award, 1990
Jan Merrill-Oldham

Slowly but steadily the collections of the University of Connecticut Libraries have benefited from the conservation and preservation program developed by Jan Merrill-Oldham. No aspect of the libraries' work that touches in any way on the care and protection of its collections is too small to escape her attention. Yet each detail is placed in the context of a larger understanding of what the libraries' collections should look like and each individual action contributes to a broader goal. Although they may not recognize it, users of those collections for years to come will owe her a debt of gratitude.

In much the same fashion the staff of the University of Connecticut Li-

From left to right: Nancy John, ALCTS President; Jan Merrill-Oldham, Esther J. Piercy Award winner; and Richard Smiraglia, award committee chair.

braries have benefited from her care and attention. Just as she wants the best for the libraries' collections, so she wants the best for every aspect of the libraries' programs. If she sometimes pushes us beyond our capacities and expects us to stretch our resources beyond what they can accomplish, she does so with good grace and a willingness to always do more than her share to make good things happen.

Her energy and her enthusiasm for the cause of preservation have also benefited the wider world of librarianship. State, regional, national, and international preservation activities and programs regularly draw on her knowledge of the field and her ability to clearly and concisely translate complex technical material into spoken and written words. She has a remarkable record of participation and leadership in such endeavors as the Connecticut Preservation Task Force, the development of the ALA Preservation Statement, the revision of the Library Binding Institute's standard for library binding, several committees of the Association for Library Collections and Technical Services, innumerable publications, and a wide assortment of continuing education programs. Yet she is never too busy to answer the daily phone calls and letters she receives from individuals asking for her advice and counsel. Her answers might sometimes be more detailed than what the person expected; but that is only because of her need to be certain that he or she understands not only how and why some preservation issue might best be addressed but also the options and the limitations of our current knowledge.

Best of all, she too has benefited from her intense interest and involvement in preservation. She has worked at the University of Connecticut Libraries, where she has gone from a book mending assistant to the head of the Preservation Department, since the early 1970s. Along the way she was a conservation and preservation intern at the Yale University Library in 1979–1980 and earned an M.L.S. degree from the University of Rhode Island in 1983. As one who has worked with her since she first began her library career, I can attest to the breadth and depth of her professional growth and development over the years.

As one who benefited personally from Esther J. Piercy's skills as editor of *Library Resources & Technical Services,* I am especially pleased that Jan Merrill-Oldham has been awarded the Esther J. Piercy Award. I know how much Miss Piercy would have approved of this year's choice.—*Norman D. Stevens, for the jury.*

The Margaret Mann Citation, 1990
Ronald Hagler

Every long-running saga has its heroes and villains. Ronald Hagler is the unsung hero of the *Anglo-American Cataloguing Rules (AACR)*—that unfinished drama in (so far) three acts. His is the only name (I have just checked) that is listed among those responsible for *AACR1* (the blue book)

From left to right: Joan Mitchell, CCS chair; Arnold Wajenberg, award committee chair; and Ronald Hagler, Margaret Mann Citation winner.

and AACR2 (the terra-cotta book) *and AACR2R* (the green book). He was the chair of the Canadian Committee on *AACR1*, Canadian representative to the Joint Steering Committee responsible for *AACR2*, and copy editor and proofreader *extraordinaire* for *AACR2R*. I have known Ronald in all these manifestations and have had the privilege of observing his many contributions at close quarters. He is unique among cataloguers and catalogue code framers in that he knows all of the large issues and can hold his own in debate with the best and brightest, but his eye is also upon the sparrow. No one who has ever seen a proof marked up by Ronald could think that anything ever escapes his eagle eye and nimble brain. The fact is that Ronald is as responsible as anyone for the many excellences of the *AACR*s and, if there were justice in the world (hollow laughter), he would be known for that achievement beyond the small circle of cataloguing mavens. He has also played a great and irreplaceable part in the work on the two editions of *The Concise AACR2*.

Ronald Hagler is an Ontarian by birth, going west as a young man to become a British Columbian by domicile and by choice. His doctoral dissertation (University of Michigan) dealt with Canadian publishing. He was a founding faculty member of the University of British Columbia's School of Librarianship (now the School of Library, Archival and Information Studies) and has taught there for almost three decades. He is a dedicated and inspiring teacher, the latter no mean feat when it comes to teaching cataloguing, and there are generations of Canadian librarians who are the better at their profession because they learned about cataloguing and the

importance of cataloguing from Ronald Hagler. His approach to the teaching of cataloguing has always been that of putting it in the context of the technology that has evolved so rapidly during his teaching career. Cataloguing is not the only area in which he teaches. He also gives courses in the fields of archival bibliographic control and the history of the book and book arts.

Ronald Hagler has been very active and influential professionally in Canada and beyond. Besides organizing and giving nationwide workshops on the various manifestations of *AACR* and on the *International Standard Bibliographic Description (ISBD),* he has spoken at workshops and conferences in Canada, the U.S., and Asia. He has also been a consultant for the National Library of Canada and the public library system in British Columbia. In all of these activities he has given the lie to the theory that all cataloguers and, worse, cataloguing instructors are cloistered, ivory-tower types with no knowledge of, or regard for, the practicalities of life. His talks and papers are engaging and commonsensical and always demonstrate his concern for the users of the catalogs that are based on our rules and procedures.

Ronald Hagler the author has given us numerous articles and papers in major journals and two important and useful books. The first, *Where's That Rule?* (1979), provided a cross-index between *AACR1* and *AACR2* and, by demonstrating the characteristic Haglerian virtues of meticulousness and practicality, proved a boon to the thousands of cataloguers working during The Great Code Change. The second, *The Bibliographic Record and Information Technology* (written with Peter Simmons and published in 1982), is quite simply the best book on the topic of bibliographic control in the context of modern technology. He has, solo this time, almost completed a revision of this essential work.

Ronald Hagler the person is about as far from the desiccated image of a cataloguer as one could get. He is a gourmet cook, an avid traveler, a good companion, and a loyal friend. His social, cultural, and literary interests are many and various and his enjoyment of life profound. The 1990 Margaret Mann Citation is going to a colleague who has done much for our profession, a worthy recipient of this prestigious award.—*Michael Gorman, for the committee.*

Resources Section Blackwell/North America Scholarship Award, 1990
Joe A. Hewitt

"Highly relevant," "thought-provoking," "intellectually substantial," "original," "of long-term value." These were some of the attributes the Blackwell/North America Scholarship Awards Committee looked for as it examined the nominations for books and articles on acquisitions or collec-

From left to right: Cecily John, RS chair; Stanley Hodge, award committee chair; Joe A. Hewitt, RS Blackwell/North America Scholarship Award winner; Jack Walsdorf, Blackwell/North America; and Sheila S. Intner, Simmons College.

tion development for its annual award. With widespread support from outside nominators and an enthusiastic response from committee members, reaching a consensus was no problem—Joe A. Hewitt was a repeat winner of this award for his article "On the Nature of Acquisitions." (He was a previous B/NA Scholarship cowinner with John S. Shipman in 1988 for their essay, "Cooperative Collection Development among Research Libraries in the Age of Networking.")

"On the Nature of Acquisitions," published in the April 1989 issue of *LRTS,* has an interesting history. Hewitt originally set out to write a paper on cataloging based on notes compiled for a library school seminar on the administration of technical services. These notes, some of which he had referred to for seven or eight years, dealt with cataloging, serials, and acquisitions. Realizing that an article on the nature of cataloging could be written only in the context of a large body of literature connecting catalogers and cataloging, he decided instead to focus on acquisitions. Encouragement came from his wife, Susan K. Nutter, director of libraries at North Carolina State University. She is a graduate of Simmons College, and the $1,000 scholarship will be given in her honor to a deserving library science student at that institution.

Most of Hewitt's notes were simply observations derived from fifteen years as an associate university librarian for technical services. Amazingly, he has *never been* an acquisitions librarian! Readers of this article would never assume that, for Hewitt and the awards committee received several communications stating that the article expressed exactly how it felt to be an acquisitions librarian, and that it was about time someone had done so.

"On the Nature of Acquisitions" goes far beyond that, however. The committee found it to be a measured and thoughtful analysis of acquisitions work, comprising a sociology of the discipline that could serve as a model for analysis of other library specialties. It presents a carefully drawn profile of acquisitions work including factors relating to perceptions and status, and the role of acquisitions in the larger library setting.

Acquisitions librarians will surely relate to this article and recommend that their colleagues read it as well. Indeed, one can almost sense them saying: "Thanks Joe, for telling it like it is."—*Stanley P. Hodge, Chair.*

Serials Section Bowker/Ulrich's Serials Librarianship Award, 1990 Jean G. Cook

Jean G. Cook is the recipient of the 1990 ALCTS Serials Section Bowker/Ulrich's Serials Librarianship Award in recognition of her leadership and distinguished contributions to serials librarianship. The award was presented at the ALA Annual Conference in Chicago on June 23.

From left to right: Jean G. Cook, SS Bowker/Ulrich's Serials Librarianship Award winner; Ellen S. Kovacic, award committee chair; Leigh Yuster, R. R. Bowker; and Judy Salk, R. R. Bowker.

Jean Cook has been head of the serials department at Iowa State University since 1980. Her previous positions include head of the serials department at Duke University and head of the serials cataloging section and serials cataloger at Iowa State. She received a bachelor of arts degree with high distinction in journalism from the University of Iowa and has a master of library science degree from the University of Oklahoma.

Jean Cook's contributions to the American Library Association are impressive. She has served as director-at-large on the RTSD (now ALCTS) board, as chair of the Serials Section, and for six years as ALA representative to the CONSER Advisory Group. She has served effectively and conscientiously on innumerable ALA committees and has played an integral part in conference program and institute planning.

Her service to serials librarianship outside of ALA is also outstanding. She is a member of the advisory board of the Iowa Newspaper Project and serves as coordinator of its western site. She is an outside reviewer for the National Endowment for the Humanities U.S. Newspaper Program and is chair of the Publicity Committee of the Serials Industry Systems Advisory Committee (SISAC).

Jean has been coeditor of the highly regarded series "Advances in Serials Management" and wrote a chapter in volume one entitled "Serials' Place on the Organization Chart: A Historical Perspective." She serves on the editorial board of *Cataloging & Classification Quarterly* and *Serials Review.*

The ALCTS Serials Section Bowker/Ulrich's Serials Librarianship Award is supported by R.R. Bowker Company with funding of $1,500 annually. It is awarded for "distinguished contributions to serials librarianship within the previous three years, demonstrated by such activities as leadership in serials-related activities through participation in professional associations and/or library education programs, contributions to the body of serials literature, conduct of research in the area of serials, development of tools or methods to enhance access to or management of serials, or other advances leading to a better understanding of the field of serials." Jean Cook is an outstanding serials librarian, well respected by her peers for her depth of knowledge, experience, excellent judgment, and professionalism. She is a most worthy recipient of the sixth annual award.—*Ellen Siegel Kovacic, Chair.*

Best of *LRTS* Award, 1990
Joe A. Hewitt

The award for the best article published in *Library Resources & Technical Services* during 1989 was awarded to Joe A. Hewitt, University of North Carolina at Chapel Hill, for his article "On the Nature of Acquisitions." The article appeared in the April 1989 issue of *LRTS.* It was judged to be the best article published in *LRTS* during 1989 based upon the criteria of

From left to right: Nancy John, ALCTS President; Joe A. Hewitt, Best of LRTS *Award winner; and Karen Schmidt, award committee chair.*

significance of content, excellence in research, and clarity of style.

The Best of *LRTS* Award Committee agreed that Hewitt's article was both provocative and compelling, and addressed a relatively unexplored area of librarianship. In addition, the committee concurred, Hewitt has provided a creative methodology for interpolating other specializations in librarianship. The article is a unique blend of research and intuition, is refreshing to read, and clearly struck a chord among acquisitions and other librarians.

Since 1975 Hewitt has been the associate university librarian for technical services at UNC-Chapel Hill. In addition, he serves as an adjunct professor in the School of Information and Library Science at the same institution and is a fellow at the Institute for Research in Social Science there. Hewitt earned his M.L.S. from the University of North Carolina at Chapel Hill and his Ph.D. from the University of Colorado. Among his many accomplishments are the publication of three books and innumerable articles and papers on cataloguing, cooperation, and bibliographic control. During his tenure at UNC-Chapel Hill, Hewitt has been actively involved in the development of the Triangle Research Libraries Network (TRLN). Recently Hewitt was selected as a Fellow of the Center for Library Resources for 1990.

The Best of *LRTS* Award Committee is pleased and pleasantly surprised to join the Blackwell/North America Scholarship Award Committee in recognizing the contribution of Joe Hewitt to the literature of librarianship for 1989.—*Karen A. Schmidt, Chair.*

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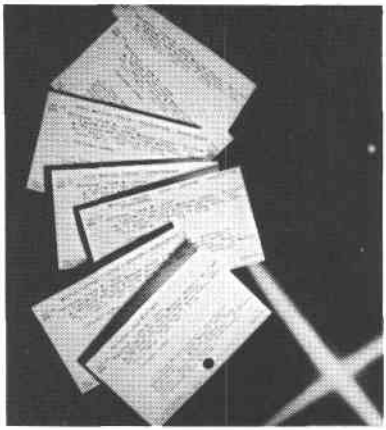

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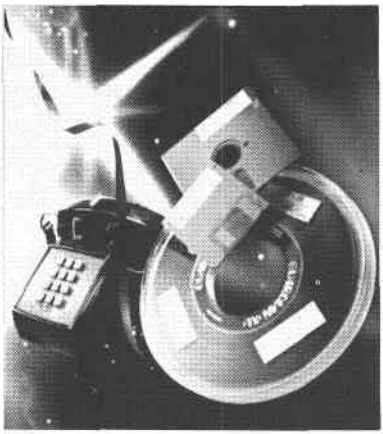

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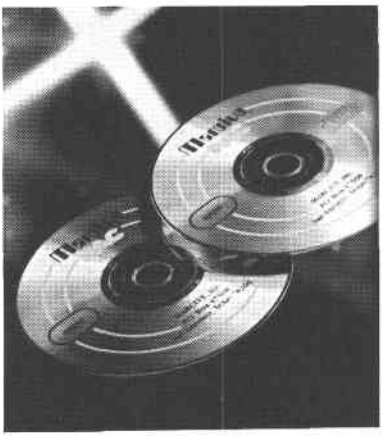

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Book Reviews

Richard D. Johnson, Editor

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Information Access: Capabilities and Limitations of Printed and Computerized Sources. By Richard Joseph Hyman. Chicago: American Library Assn., 1989. 191p. paper, $35 (ISBN 0-8389-0512-9). LC 89-6477.

In this very interesting book, Hyman has looked at problems affecting access to information during the past few decades. Specifically, he deals with the creative aspects of classification, cataloging, and thesaurus-making from the viewpoint of computer processes rather than with the actual printed work itself. He notes that by now librarians and information scientists are familiar with the values and uses of computerized searching.

Hyman also points out that two fundamental necessities are involved: (1) older printed records must be retained, and (2) automated access to information must be founded on the principles of bibliographic usage.

The first four chapters set the historical background for what follows. An excellent study at the end of the second chapter covers nineteenth-century activities. In effect, the author reminds the reader that the bases and basics of what we now know in the area of library and information science were recognized, examined, and developed before the computer became useful. Thus, one may say, a strong process was ready and waiting.

The fifth chapter, covering "Automated Cataloging Access," and the sixth, "Automatic Analytical Access," "put the show on the road," so to speak. The final chapter sums up everything under the title "Status and Needs," and is followed by a "Selected Bibliography" and a well-made index.

In the chapter dealing with background organization, the author makes the point that the modern computerized information sources still require a basic knowledge of "the discipline's present and past vocabulary" (p.23). The historian would recognize this immediately, but to research personnel, especially those at the cutting edge of research, it requires effort to remember that the past is prologue, especially at times when the past may appear to get

in the way of the future.

Hyman notes that a variety of access options have not necessarily been intended or recommended in some of the major cataloging codes over the past few decades (p.45). Specifically, for example, should a person other than the main author involved in compiling data and illustrating detail, thereby contributing to the work, be identified with a *cross-reference* or an *added entry*? A very good argument can be made for either method since in either case only one more entry is added. When catalogs were mainly in card form, this was a serious matter because it added thousands of cards annually to the physical catalog. With computer access, many kinds of additions and analytics can be made.

Hyman also reports that, in spite of "computerized surrogates, most libraries of any size or age still resort to manual searches of printed or machine readable databases" (p.26), apparently because not everything in the *National Union Catalog* is available by computer. Of course, specialized databases in science and technology may require specialized equipment.

This slim book covers the major networks and the major productive means of access. Chapter topics include "Printed Descriptive Cataloging Access" and "Printed Subject Access," as well as "Automated Catalog Access" and "Automated Analytical Access." The writing is clear and examples well illustrated. It ends with a summing up of the text, as one might expect, but also contains a thoughtful discourse on possibilities for the future, entitled "Status and Needs."

The reader who is familiar with the subject matter of the first six chapters, describing and analyzing what exists, may wish to begin with the final chapter. This reviewer found that doing this gave a firm foundation as to the purposes of the author and for understanding what each chapter covering detail was presenting. It thus gave a better perspective on the text as a whole.—*Phyllis A. Richmond, Cleveland, Ohio.*

Collection Management: Background and Principles. By William A. Wortman. Chicago: American Library Assn., 1989, 243p. $25 (ISBN 0-8389-0510-2). LC 89-144.

Don't overlook this book because you think you know what it's about. Neither the title nor the subject heading, "Collection Development (Libraries)," adequately describes its scope. From his vantage point of library collections, Wortman treats publishing, scholarly communication, and all facets of library operations. To help overcome fragmentation in the profession, he claims to have written the first comprehensive monograph on collection management. For him, "providing a good and appropriate collection is the library's primary mission. . . ." Acquisitions, cataloging, reference, interlibrary loan, and administration are only means to this end.

The term, Collection Management Program (CMP), is used to name his unifying concept. Librarians must possess broad knowledge to select materials wisely. They should have expertise in all the following areas: the role of various types of materials, both print and nonprint, in the information process; commercial and scholarly publishing including pricing; the mission of the individual library plus the definition, needs, and wants of its user community; and quantitative and qualitative evaluations of the existing collection. Only then can librarians select materials from the broad array of possible choices. After the acquisitions process comes bibliographic and physical availability including resource sharing. Finally, the collection manager must preserve and weed the collection. Wortman concludes with personnel, administration, and the profession in support of all the preceding collection management functions.

Wortman has done an excellent job of condensing without simplifying. In summarizing the work of the best writers in the field, he brings out opposing viewpoints and points out where research does not support accepted tru-

isms. Though he attempts to treat equitably all types of libraries, from the media center to the research institution, the emphasis is on academic library concerns. For example, there is no explicit mention of the current public library controversy over the "give-them-what-they-want" philosophy. In addition to footnotes, he provides an extensive, up-to-date, twelve-page bibliography.

His intended audience is, first, practicing librarians, then newcomers and students, and finally library administrators. I believe that he succeeds admirably in his goal of giving librarians and administrators an "occasion to step back and view their operations broadly." I did not come away with many new insights, but I profited from having known facts and ideas put into a coherent framework. For newcomers, Wortman's long list of required skills might prove daunting. At times, I thought that it would be easier to become a saint than a successful collection manager.

I recommend this book highly, especially for academic libraries, because it successfully synthesizes vast quantities of material and provides a unifying concept for library operations. Normally, I give review copies to my library; I intend to put this one on my bookself.—*Robert P. Holley, Wayne State University, Detroit, Michigan.*

Elements of Bibliography: A Simplified Approach. Rev. ed. By Robert B. Harmon. Metuchen, N.J.: Scarecrow Press, 1989. 288p. $29.50 (ISBN 0-8108-2218-0). LC 89-35367.

In the preface to this enlarged and redesigned edition of a book first published in 1981, the author describes his work as "primarily a guide to the literature of bibliography . . . accompanied by basic standards for compiling various kinds of bibliographic instruments." The book is directed to "first, the prospective librarian and second, anyone who is compiling a bibliography" and supplies "suggested stan-

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dards and readings . . . that will assist in the compiling process'' (p.xi).

In form the book resembles an expanded encyclopedia article with the addition of extensive documentation, including lists of ''Selected Related Writings'' and endnotes for individual chapters. The text proper covers 178 pages, and the remaining 110 pages include five appendixes, an annotated bibliography of 297 items, and three indexes (name, subject, and title).

The author accepts the broad concept by which English-speaking writers give the label ''Bibliography'' to both *Buchkunde* and *Bücherkunde;* he also touches briefly on book selection, reference work, and other activities that American librarians have chosen to call ''bibliographical.''

No claim of originality is made for the text, which the author describes as ''expository at the introductory level''; he acknowledges help received from colleagues and eminent experts. The writing is simple and clear but at points could benefit by pruning; the preface and the annotations are admirably terse.

In so small a book—undertaken, apparently, in the hope of assisting librarians and others to make and use lists of books and other documents—even a brief treatment of the ''anatomical'' bibliography of textual critics and specialists in rare books takes up precious space that could be used to advantage to extend the presentation of enumerative (systematic) bibliography, the oldest and most widely recognized type and the one most obviously related to the author's avowed purpose.

Not all budding librarians or beginning compilers will need to draw upon remote or esoteric bibliographies, but much of the charm of the study—at its best a voyage through history and a trip around the world—is lost if the student cannot encounter individual bibliographers like Estreicher, Lowndes, Medina and Quérard; cannot observe the differences between Germanic and Romance bibliographies or the contrast between Belgian and Dutch bibliographies; cannot compare the special lists of academic dissertations and other categories of publications outside the book trade; and does not examine subject bibliographies of literature and history in relation to the corresponding lists of national imprints. The excellence of European writers on bibliography consists in their attention to such details as these. It is noticeable that the literature cited is predominantly in English.

But at a time of rapid technological change the author justifiably concentrates on the practically useful and the contemporary. It is both his merit and his misfortune that much of the content of his book will go rapidly out of date.

Two small blemishes call for attention: (1) ''4to,'' ''8vo,'' and similar terms are listed as ''book sizes'' in Appendix C with dimensions given in inches, but their significance in descriptive bibliography as indicating fold of the sheet is not explained; (2) throughout this revised edition, though not in the first edition, Brunet's *Manuel du libraire* is cited with the misspelling ''Manual.''

Though necessarily incomplete and frankly elementary, this book is a trustworthy guide to the subject and an impressive introduction to the current literature. It is less thorough than the works of European writers on enumerative (systematic) bibliography; but, unlike them, it gives recognition also to analytical (critical) bibliography and to aspects of book production.—*Robert Woodman Wadsworth, Chicago, Illinois.*

Advances in Serials Management: A Research Annual. V.3, 1989. Ed. by Jean G. Cook and Marcia Tuttle. Greenwich, Conn.: JAI Press, 1989. 265p. $58.50 (ISBN 0-89232-965-3).

The editors, Cook and Tuttle, have stated that their purpose is ''exploring, encouraging, and communicating ideas and issues that advance the publication, control, and use of serials'' (p.ix). In volume three of the series, they have selected nine articles that address timely issues.

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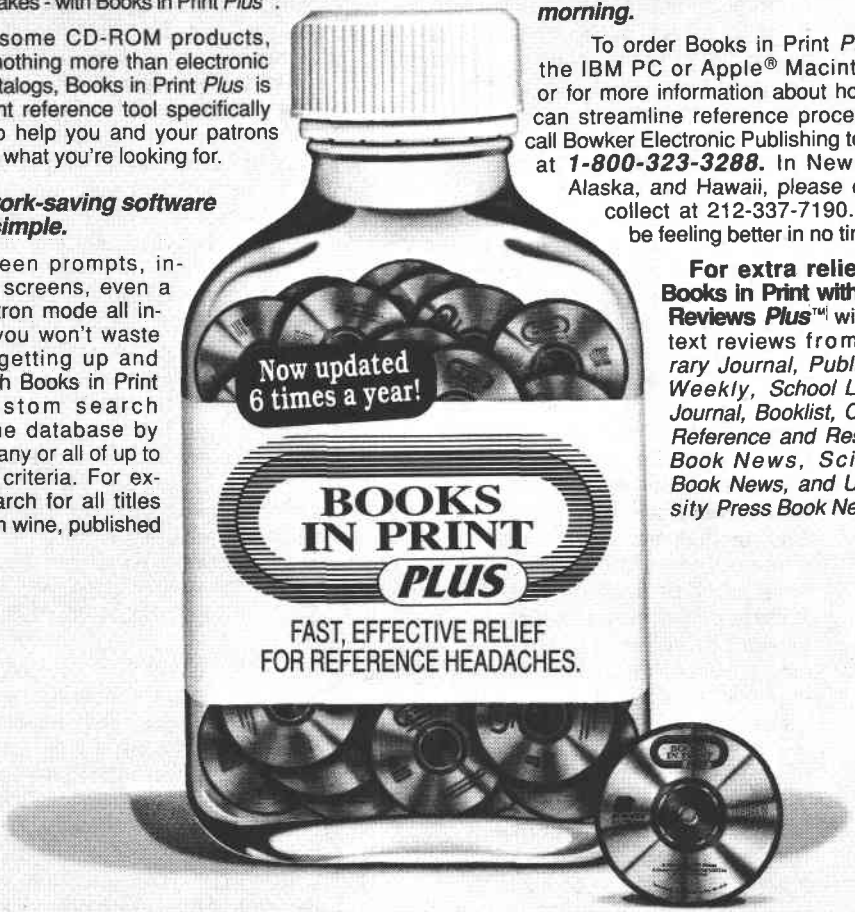

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Four articles suggest solutions to the problem of meeting the increased demand for serials and serial articles. Barrie T. Stern and Robert M. Campbell give a clear history of ADONIS, a trial document delivery service on CD-ROM, including the technical aspects of disc storage, copyright laws, and the cooperation between publishers and libraries. They also make recommendations for the future use of ADONIS.

At Utah State University, no new serial titles had been ordered in two years, and 300 titles had been cancelled. Jan Anderson describes the development of a request proposal document, a survey questionnaire, and an evaluation form for vendor comparison designed to consolidate the bulk of the serial subscriptions to a single vendor. The result of their project is a predicted savings of $15,000–$17,000 in service charges for the first two years.

As a way to deal with increasing subscription costs and reduced budgets, Jane Baldwin and W. M. Baldwin discuss the use of the impact factor for evaluating journals. (The impact factor is the ratio between the number of citations and the total number of citable items established by the Institute for Scientific Information.) They recommend that collection development librarians use this method to judge journal costs in relation to quality, with the caution that one must compare titles within subject areas.

Jan Bachmann-Derthick and Sandra Spurlock describe a use survey of serials done at the University of New Mexico. Their article presents an extensive explanation of the survey and the Kantor branching technique, analyzes the results, and recommends the method to other academic libraries.

Ann Okerson and Judy McQueen, in their article, discuss alternate careers for serials librarians. Okerson presents a good basic review of the differences between the nontraditional library career in the private sector and the traditional library setting. McQueen discusses methods that one can use to assess one's strengths and skills and to present them effectively in an interview for a nontraditional job.

Three of the book's articles address preservation, the WLN Cataloging Service, and CONSER. John F. Dean examines methods of binding serials and includes illustrations and a glossary of binding terms. David Griffin gives an informative history of the WLN Cataloging Service, emphasizing its efforts in serials cataloging. Suzanne Striedieck presents a concise history of the CONSER program and discusses the impact of the CONSER database on serials cataloging.

Finally, Lois N. Upham reports on the state of serials education in the United States and includes statistics on the available courses in library schools and lists teachers who specialize in serials. This volume is recommended for academic libraries and large public libraries facing inflation and reduced serials budgets.—*Cheryl L. Conway, University of Arkansas, Fayetteville.*

CD-ROM in the Library: Today and Tomorrow. Ed. by Mary Kay Duggan. A conference presented by UC Berkeley Extension and the School of Library and Information Studies, UC Berkeley. Boston: G.K. Hall, 1990. 126p. paper, $22.50 (ISBN 0-8161-1934-1). LC 89-71655.

CD-ROM Technology for Information Managers. By Ahmed M. Elshami. Chicago: American Library Assn., 1990. 280p. paper, $35 (ISBN 0-8389-0523-4). LC 89-37880.

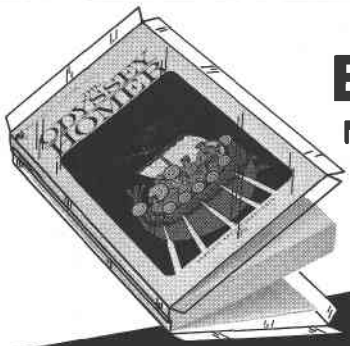
CD-ROM is an up-and-coming technology in the library world. It is generally much easier to use than paper, microform, or online products, and its costs are much lower than online costs. Librarians must understand CD-ROM if they are to make informed decisions regarding its place and application in the library. *CD-ROM Technology for Information Managers* is a general overview of and introduction to the technical world of CD-ROM. Standards, composition, production, the mastering, and the reading of the opti-

cal disk family are all covered in clearly written text with concise accompanying diagrams.

CD-ROM technology is an extensive world of information, but Elshami successfully delineates the components and places them in context for the information manager. He then proceeds from the foundation of CD-ROM knowledge that he has laid in the first four chapters to construct a comparison of CD-ROM with other media. Other topics include hardware and networking, workstations, and library applications. Extensive appendixes cover CD-ROM products, distributors and producers, manufacturers of CD-ROM, WORM and erasable drives, and retrieval software developers; these listings are a treasure trove of information.

CD-ROM for Information Managers is a well-written text that communicates the technology's complexities and applications, but to best grasp the concepts, the reader needs to be an information manager with a good background in technology and automation. *CD-ROM in the Library: Today and Tomorrow* is the text of a conference, and the intended reader is not necessarily a "tekkie." The information is specific to CD-ROM applications in libraries, and this title is of more general interest than Elshami's work.

In *CD-ROM in the Library*, each presentation is specifically aimed at the use of CD-ROM in a library, and many are sagas born from personal experience. Eddy Hogan states that, "CD-ROM makes sense, for now, for most libraries. Most library materials are, in fact, READ ONLY." John Ober writes of CD-ROM in the networking arena, a great conceptual use of the technology that is unfortunately constrained by the current capabilities of CD-ROM; access and searching in a network configuration are slow. CD-PACS (CD-ROM public access catalogs) are praised by Charlotte Nolan as an inexpensive alternative to online



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PACs, but she does note that CD-ROM is limited by its noninteractive nature.

There is no doubt that CD-ROM is here to stay, but as optical technology changes so changeth CD-ROM and its applications in libraries. Librarians must understand this technology and how it can best fit into the services a library provides. *CD-ROM in the Library* provides some specific information on CD-ROM library applications, and this text should be used as an introduction to the technology's possibilities in a library. *CD-ROM Technology for Information Managers* contains wonderful detail on the technology and how it can be applied to the library, but the reader needs some technical background in order to best understand the work.—*Denise A. Garofalo, Mid-Hudson Library System, Poughkeepsie, New York.*

Authority Control: Principles, Applications, and Instructions. By Doris Hargrett Clack. Chicago: American Library Assn., 1990. 232p. $45 (ISBN 0-8389-0516-1). LC 89-033240.

As Clack notes in her introduction, there are few current, practical guides to authority work. Though the essentials are covered by the basic documents—*AACR2, LCRI, USMARC Format for Authorities*—there remains a need for a more general, "user-friendly" introduction to the history, principles, and practices of modern authority work. The book under review addresses these needs, with mixed success.

In her first three chapters, Clack provides a good, broad-ranging introduction to the environment of modern authority control. She notes the importance of the development of automated systems to the rise in interest in authority control, and discusses the activities of bibliographic utilities, commercial vendors, and cooperative ventures (NACO, LSP, UNIMARC) in pursuit of national and international standards for authorities. Clack also covers the general principles and processes of authority control, acknowledging that many libraries elect to do less than full authority work, yet arguing repeatedly for the value of fully researched and established forms for every controlled heading. If anything, the latter point is made too forcefully, making the book seem at times more principled than practical.

The remaining chapters are devoted to the various parts of the authority record, and to the four types of controlled heading: names, uniform titles, series, and subjects. This portion of the book is less successful. One problem is the choice of card format as the focus for most of the discussion and examples, with a single chapter devoted to the USMARC authorities format. This seems to contradict Clack's own observation that automation and the renewed interest in authorities have gone hand-in-hand. Most libraries that attempt to control the headings in their catalogs will rely at some point on MARC authority records. A more detailed treatment of the MARC format would have been welcome.

The selection of particular points to cover with regard to the different types of headings also raises questions. In general, Clack's guidelines begin after an authorized heading has been formulated; yet recognizing and formulating correct AACR2 headings are skills essential to authority work. More specifically, the discussion of conference names fails to mention LC's practice of generalizing the authorized name of an ongoing conference. (Mention of this practice is buried in a discussion of the sources found area.) No mention is made of conferences subordinated to corporate bodies. Guidance is given for handling changes in multi-part item titles, but not for recognizing and handling changes in monographic series titles. No guidance is given regarding the distinction between place names used geographically and jurisdictionally. The chapter on uniform titles diverges at several points from LC practice.

Another glaring problem with these chapters is the large number of errors to

be found in the tables and examples that accompany the text. In the tables on pages 97–99, ten grid position checks are placed incorrectly, and two MARC subfield codes are misidentified. On page 122, the column heading, "Date of Qualifier," should be "Data of Qualifier," and the column heading, "Location of Initial," has been offset from the subcolumns it should cover by one column to the right. The examples contain errors of omission (e.g., Paul II for John Paul II, London (England) for London (England)). Corporation, omitted $q) and commission (e.g., x for xx, UF for BT, $1 for $l, $g for $q). Catalogers will cringe.

On a more positive note, the book concludes with a useful list of reference sources for establishing headings and an extensive bibliography.

Robert Burger's *Authority Work,* published in 1985, does not attempt to be as thorough as Clack's book; yet it remains more satisfying as an introductory text. Its choices of what to emphasize are more broadly useful, and its zest and sense of humor convey better than Clack's dry imperatives the fascination of authority work.—*Stephen S. Hearn, University of Minnesota, Minneapolis.*

Getting Published: The Acquisition Process at University Presses. By Paul Parsons. Knoxville: Univ. of Tennessee Pr., 1989. 243p. $29.95 (ISBN 0-87049-611-5); paper, $14.95 (ISBN 0-87049-612-3). LC 89-31711. (Distributed by University of Tennessee Press, P.O. Box 6525, Ithaca, NY 14850).

In seven exceedingly readable chapters, Paul Parsons, the R.M. Seaton Professor of Journalism and Mass Communications at Kansas State University, takes the reader through all aspects of the acquisition process within university presses. Parsons reviews the practices and philosophies presently in place for actual selection of the manuscripts to be published, discusses peer review, takes the reader through the editorial steps, and highlights the important marketing points.

Parsons spent a year in on-site observation of the process at a mid-sized university press. He also conducted personal interviews with directors and editors employed by university presses and surveyed the membership of the Association of American University Presses. The author has also served in an advisory capacity to a university press, was previously a journalist, and has written a book published by a university press.

Within the book is a detailed description of the various ways manuscripts are reviewed and acquired—and the avenues through which manuscripts are actually sought. Examples are included of instances where trade books have been added successfully to university press lists.

Of particular interest to librarians are two topics covered extensively within this monograph: history and background on university presses and list-building practices. These topics will be of assistance to both collection development and acquisitions librarians who may also wish to refer academic scholars to this book for background information on university presses.

Parsons reviews the initial creation of university presses, their emergence as important "gatekeepers" in the field of scholarly publishing, discusses their evolution in order to survive, and reviews their importance as nonprofit entities in the publishing field.

Chapter two, "Specialization Through Listbuilding," is a very interesting and thorough discussion with actual examples of how a press becomes a specialist in particular areas and how it builds its list concentrating in these areas. There are benefits of this list specialization: a distinctive identity is created for the press; the knowledge base among the staff is defined; unsolicited manuscripts are easier to dismiss if they fall outside the specialization of the list; and marketing efforts can be more focused. While newer presses may still be defining themselves and their lists, familiarization

with the listbuilding specialties of university presses will assist collection development personnel in refining collecting profiles and focusing purchasing efforts.

In addition to the informative chapter on listbuilding specialization, there is an appendix identifying listbuilding areas for all American university presses.

Other books that will be complementary to this one include: *Getting into Print: The Decision-Making Process in Scholarly Publishing,* by Walter W. Powell (Chicago: Univ. of Chicago Pr., 1985), and *Handbook for Academic Authors,* by Beth Luey (New York: Cambridge Univ. Pr., 1987). A lengthy bibliography in Parsons's book provides additional background reading for those interested in the topic.

This informative book should be of interest to librarians who wish to increase their familiarity with the publishing field or who need to assist academic patrons who have such an interest. The insight into the publishing process and the importance of specialization will be helpful to collection development staff and acquisitions personnel.—*Jennifer Cargill, Rice University, Houston, Texas.*

Examples Illustrating AACR2 1988 Revision. By Eric J. Hunter. London: Library Association, 1989. 235p. paper, $19 (ISBN 0-85365-649-5). Distributed in U.S. by American Library Assn.

The publication of the 1988 revision of the second edition of *Anglo-American Cataloguing Rules* has motivated the updating of this guide originally published in 1980. Hunter's second edition has the same goals as his first: to provide examples illustrating individual rules as well as types of problems, and to be a browsable guide to general AACR2R practice. Hunter modestly declines to claim exhaustively for the 383 examples he includes (over one-third more than the first edition), but only some forms of names and some non-Christian scriptures are not covered in detail.

An index of specific problems and general matters directs the reader to numbered examples. Another index gives rule numbers in *AACR2R* order and the appropriate example numbers. These indexes appear at the front of the book, between the preface and the body of the text. This arrangement, while conceptually reasonable, may be confusing to those who do not expect back-of-the-book type indexes to be found at the front. In addition to these general indexes, each chapter has its own alphabetical index to topics—again at the beginning.

The material follows the arrangement of Part I of *AACR2R*, with reference to rules from Part II given as appropriate. Within each section, examples are arranged alphabetically by main entry heading. Appendixes illustrate added entries, analytics, references, and authority files. The examples are presented as if typed and are laid out in a paragraphed format, with headings in uppercase type. Some reproductions of chief sources are provided. Each example comments on the item itself, identifies the rules being illustrated, and occasionally gives Hunter's (not Library of Congress) interpretation. In fact, the preface specifically disclaims any intention of presenting "an official view" of *AACR2R* interpretation (p.ix).

Hunter's work is most likely to be compared to Maxwell's *Handbook for AACR2, 1988 Revision* (reviewed in *LRTS,* April 1990). Maxwell uses a narrative style to convey information about cataloging practice, and frequently cites Library of Congress Rule Interpretations. Hunter confines his remarks to each example, but notes similar cases and the inferences experienced catalogers will draw.

This work may be useful as a desk reference for assistance with unfamiliar parts of the rules, and students and teachers will find useful examples of interesting cases. A limitation for North American catalogers, however, is the British focus. Maxwell will be more useful as a guide for American

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catalogers and as a supplemental text in American library schools. This book would be a useful purchase for large catalog departments and for schools of library and information science. Cataloging teachers should find the many examples useful for clarification of confusing issues or to illustrate variations in practice.—*Ellen Crosby, Indiana University, Bloomington.*

Weeding Library Collections: Library Weeding Methods. 3d ed. By Stanley J. Slote. Englewood, Colo.: Libraries Unlimited, 1989. 283p. $27.50 U.S.: $33 elsewhere (ISBN 0-87287-633-0). LC 89-14498.

The third edition of *Weeding Library Collections,* by Stanley Slote, documents the literature and procedures related to weeding library materials. In addition, it promotes the criteria and methods that Slote argues convincingly are most valid in weeding. No doubt, as was the case with the second edition, this new edition will be the standard work on the subject.

The book is separated into two basic parts. Part one, consisting of eight chapters, is the background and introduction to weeding (theoretical aspects). The six chapters in part two deal with the weeding process and methods employed in that process. Slote suggests that readers who want to get on with the weeding process begin with part two. Because weeding can be a very sensitive activity, any librarian involved in the process would be well advised to review the arguments for and against weeding as Slote describes them. He provides a summary of "standards" related to weeding from various organizations. He also provides a listing of his own standards for weeding as well as generic weeding criteria.

It should be understood that some libraries may not accept the weeding objectives as stated. It is pointed out that the core collection (that portion of the collection identified for retention in the primary collection area) will differ among various types of libraries in regard to the use-percentage criteria. Type-of-library characteristics will influence weeding as they have influenced selection in the first place.

Chapter eight is an "Analysis and Review of the Literature of Weeding." This analysis and review is thorough and very helpful in understanding the existing literature. Slote is a severe critic of the literature, saying there is little cumulation of knowledge and that articles currently being published could have been written fifteen to seventy-five years ago (p.46). Nevertheless, his analysis and review of some of the major contributions clearly illustrate the value of that literature.

Slote begins part two of the book with a chapter entitled "The New Concept in Weeding." He contrasts his method of weeding with that which has been used for "hundreds of years" and which is described as the subjective application of vague rules—difficult to describe accurately, difficult to apply consistently, and difficult to evaluate. The emphasis suggested is on methods that have "the ability to predict which volumes are likely to enjoy future usage and which are not." The conclusion reached is that the key variable in predicting future usage is past and current usage. His research has led Slote to discard such variables as age, language, subject, and type of work.

Part two contains detailed descriptions of four methods of weeding, including a discussion of the advantages and disadvantages, steps to implementation, and illustrations of data collection. The "Computer Assisted Method" chapter is quite comprehensive. Slote concludes the book with a chapter on practical considerations and a couple of appendixes—one with forms for data collection and the other consisting of "Four Reports on the Slote Weeding Method." While of benefit to all kinds of libraries, this book is essential for most larger libraries and library systems. Another work, *Weeding and Maintenance of Reference Collections,* edited by Sydney Pierce (Haworth, 1990), has re-

cently been announced. (It is an issue of *The Reference Librarian.*) However, the Slote work, because of its broad application, will continue to be the primary reference in the field.—*Don Lanier, University of Illinois at Chicago, College of Medicine (Rockford).*

Technology for the '90s: Microcomputers in Libraries. Research Contributions from the 1989 Computers in Libraries Conference. Ed. by Nancy Melin Nelson. Supplements to Computers in Libraries, no.15. Westport, Conn.: Meckler, 1990. 107p. $35 (ISBN 0-88736-487-X). LC 89-49458.

This slim volume contains papers presented at the opening general session of the 1989 Computers in Libraries conference. Milo Nelson's essay begins the volume with a philosophical overview of what libraries should do to satisfy information needs and admonishes librarians to be more than "shoe clerks and lighthouse tenders." Nelson believes that we will become interpreters of information and that we must do more than acquire, process, retrieve, and loan materials. Barbara Quint's very short essay reminds us that online databases still offer the most "bang for the buck" and describes the changing online environment as pricing structures change and librarians look for a new niche as end-user training becomes commonplace.

William Gray Potter discusses some "enhanced" features of online catalogs, including the addition of government documents records and community information files to local catalogs, providing periodical indexes along with the library catalog, providing full text of journal articles, providing gateways to local and remote systems, providing remote access to the catalog, and development of knowledge workstations with sophisticated display and downloading capabilities. A brief description of microcomputer evolution is contributed by Howard Curtis. He predicts that powerful workstations will let us interact with central information servers to extract and analyze data. Eric Flower goes to great lengths in his presentation to convince us to buy only 80386 machines and explains such things as OS vs. DOS 4.0 and MCA vs. EISA. Norman Desmarais covers optical information systems in his paper, emphasizing current and future storage methods.

If you have a need to learn about artificial intelligence and don't know where to start, I recommend Ralph Alberico's informative essay and bibliography on AI, past, present, and future. Jane Beaumont wraps up with a summary of a topic mentioned in most of the essays, that is, the importance of a powerful library workstation in providing a sound platform for getting the most out of new library technology. Beaumont wisely points out that "library management must come to grips with the planning, costs, maintenance, and training associated with using technology in the workplace." Several of the articles are informative and will benefit administrators needing an overview of technology issues.—*Janet Woody, Virginia Commonwealth University, Richmond.*

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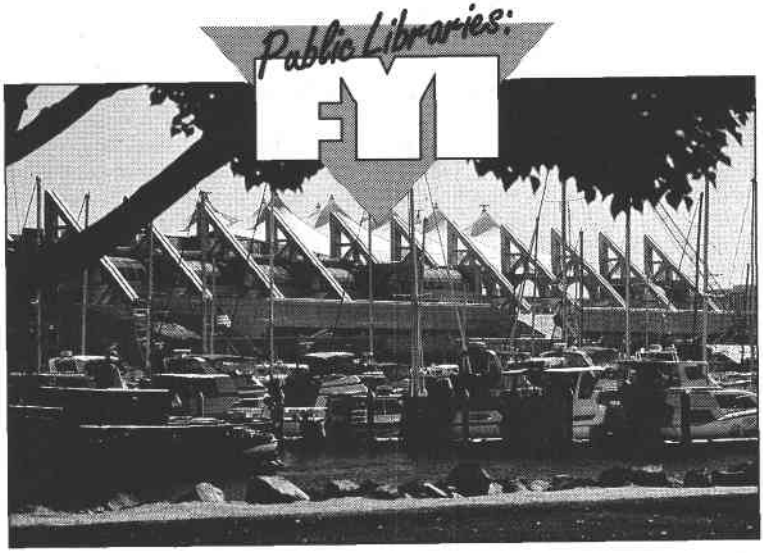

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Volume 34, 1990

Compiled by Edward Swanson

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The following types of entries are included:
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b. titles—of articles and of articles about which letters were published
c. subjects—of articles and of books reviewed

Subject entries for individuals are identified by "(*about*)"; letters are identified by "(*c*)."

Reviews are indexed by name of reviewer and by subject of the work reviewed, identified by "(*r*)." They are also listed by title under the heading "Books reviewed."

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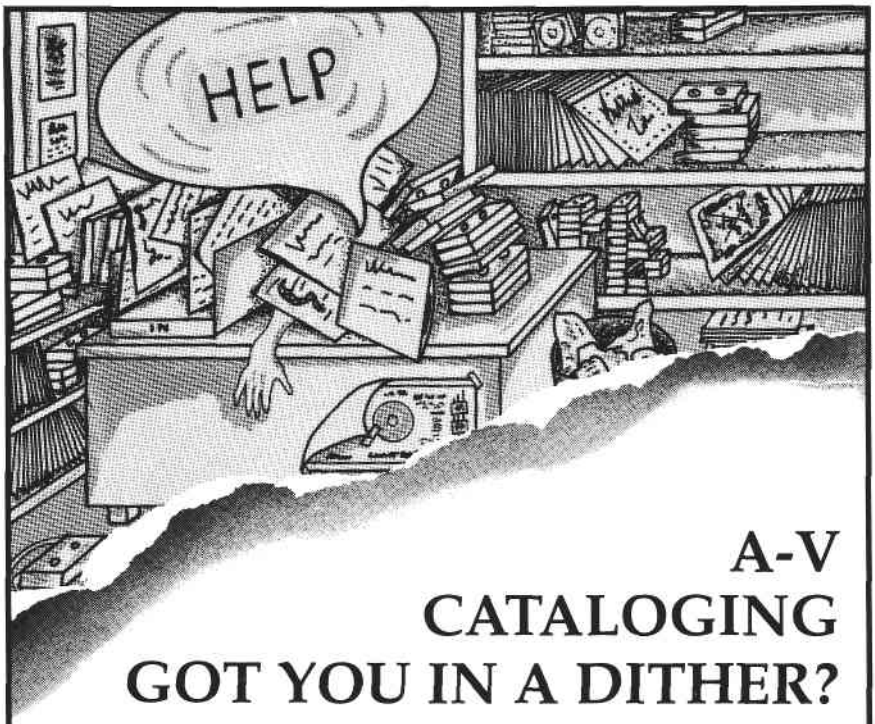

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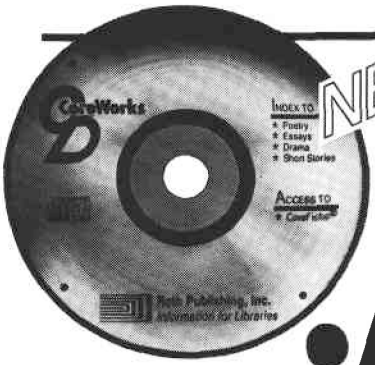

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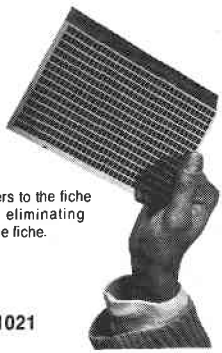

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