CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the Editor's Desk . . .</td>
<td>181</td>
</tr>
<tr>
<td>Acronyms Appearing in This Issue</td>
<td>182</td>
</tr>
<tr>
<td>Resources. M. Pankake.</td>
<td>218</td>
</tr>
<tr>
<td>Serials. G. L. Linkins.</td>
<td>238</td>
</tr>
<tr>
<td>A Two-Year Perspective on Library Preservation: An Annotated Bibliography. L. L. Fox</td>
<td>290</td>
</tr>
<tr>
<td>In Memoriam: Josephine S. Pulsifer, 1915–1986</td>
<td>319</td>
</tr>
<tr>
<td>Letters to the Editor</td>
<td>320</td>
</tr>
<tr>
<td>Index to Advertisers</td>
<td>322</td>
</tr>
</tbody>
</table>
EDITORIAL BOARD

Editor and Chair of the Editorial Board .................................................. ELIZABETH L. TATE
Editor-Designate ................................................................................................. SHEILA S. INTNER

Assistant Editors:

ELAINE SVENONIUS ..................................................... for Cataloging and Classification Section
CAROLYN HARRIS ..................................................... for Preservation of Library Materials Section
FRANCIS F. SPREITZER .............................................. for Reproduction of Library Materials Section
MARTIN J. FAIGEL ..................................................... for Resources Section
LINDA SAPP VISK ..................................................... for Serials Section
EDWARD SWANSON ................................................... Special Editor

Ex-Officio Members:

JENNIFER YOUNGER, Chair, Council of Regional Groups
THOMAS W. LEONHARDT, Editor, RTSD Newsletter
WILLIAM I. BUNNELL, Executive Director, RTSD

Library Resources & Technical Services (ISSN 0024-2527), the quarterly official publication of the Resources and Technical Services Division of the American Library Association, is published at ALA Headquarters, 50 E. Huron St., Chicago, IL 60611. Business Manager: William Bunnell, Executive Director, Resources and Technical Services Division of the American Library Association. Editorial Office: 11415 Farmland Drive, Rockville, MD 20852. Advertising Traffic Coordinator: Cheryl Penny, Central Production Unit/Journals, ALA Headquarters. Subscription Price: to members of the ALA Resources and Technical Services Division, $15 per year, included in the membership dues; to nonmembers, $30 per year; single copies $7.50.

Second-class postage paid at Chicago, Illinois, and at additional mailing offices. POSTMASTER: Send address changes to Library Resources & Technical Services, 50 E. Huron St., Chicago, IL 60611.

Library Resources & Technical Services is indexed in Library Literature, Library & Information Science Abstracts, Current Index to Journals in Education, Science Citation Index, and Hospital Literature Index. Contents are listed in CALL (Current Awareness—Library Literature). Its reviews are included in Book Review Digest, Book Review Index, and Review of Reviews.

Instructions for authors appear on p.97-8 of the January/March 1986 issue of Library Resources & Technical Services. Copies of books for review should be addressed to RTSD Newsletter book review editor, Richard D. Johnson, Director of Libraries, James M. Milne Library, State University College, Oneonta, NY 13820-1383; (607) 431-2723.

All materials in this journal subject to copyright by the American Library Association may be photocopied for the noncommercial purpose of scientific or educational advancement granted by Sections 107 and 108 of the Copyright Revision Act of 1976. For other reprinting, photocopying, or translating, address requests to the ALA Office of Rights and Permissions, 50 E. Huron St., Chicago, IL 60611.

© American Library Association 1986

Publication in Library Resources & Technical Services does not imply official endorsement by the Resources and Technical Services Division nor by ALA, and the assumption of editorial responsibility is not to be construed necessarily as endorsement of the opinions expressed by individual contributors.
In the evaluation of *LRTS* that Margaret A. Rohdy contributed to the issue of *Serials Review* that critiques our major professional journals, she asked “Does the usefulness of the ‘Year’s Work’ articles justify devoting almost one entire issue to them each year?” (V. 5, no. 3:27 July/Sept. 1979). In searching for an answer to that question, the editor has experimented with different approaches—from Joe Hewitt’s highlights of technical services in 1983 to no reviews at all last year. The responses to these experiments suggest that for some readers the reviews and especially the accompanying bibliographies are useful. Therefore, readers will find two styles of review in this issue. Three facets of technical services have been covered by traditional reviews and three by annotated bibliographies. Your expressions of preference will be welcomed. Though opinion may be divided about the value of the reviews, there is unanimity among all of the authors that preparing an annual review is difficult, time-consuming, and tedious. We owe them our gratitude for these labors of love, and we especially owe our thanks to the authors whose contributions, covering two years, appear in this issue: Tamara Swora and Audrey Fischer, Marcia Pankake, Germaine C. Linkins, C. Donald Cook and Ellen Jones, Doris Cruger Dale and Betty Ruth Wilson, and Lisa L. Fox.

With this issue a new name and a new title appear on the *LRTS* masthead. With the July/September 1987 issue, Sheila S. Intner’s title will change to “Editor.” We wish her well in this role.—*Elizabeth L. Tate.*
ACRONYMS APPEARING IN THIS ISSUE

The following acronyms appear in the reviews and bibliographies in this issue:

- **ALA** - American Library Association
- **ANSI** - American National Standards Institute
- **ARL** - Association of Research Libraries
- **ARL Newsletter** - Association of Research Libraries Newsletter
- **CG/CQ** - Cataloging & Classification Quarterly
- **CGRRL** - College & Research Libraries
- **CGRRL News** - College & Research Libraries News
- **CAN** - Conservation Administration News
- **CCS** - RTSD Cataloging and Classification Section
- **CLR** - Council on Library Resources
- **CM** - Collection Management
- **CONSER** - Conversion of Serials Project
- **DDC** - Dewey Decimal Classification*
- **ERIC** - U.S. Dept of Education. Educational Resources Information Center
- **IFLA** - International Federation of Library Associations and Institutions
- **IJMVIT** - International Journal of Micrographics and Video Technology
- **ISO** - International Organization for Standardization
- **ITAL** - Information Technology and Libraries
- **LAPT** - Library Acquisitions: Practice and Theory
- **LBI** - Library Binding Institute
- **LC** - Library of Congress
- **LCC** - Library of Congress Classification*
- **LCIB** - Library of Congress Information Bulletin
- **LCOSH** - Library of Congress Subject Headings*
- **LRTS** - Library Resources & Technical Services
- **LTR** - Library Technology Reports
- **MARBI** - ALA Representation in Machine-Readable Form of Bibliographic Information
- **MeSH** - Medical Subject Headings
- **NEH** - National Endowment for the Humanities
- **NISO** - National Information Standards Organization
- **OCLC** - OCLC Online Computer Library Center
- **PLMS** - RTSD Preservation of Library Materials Section
- **RLG** - Research Libraries Group
- **RLIN** - Research Libraries Information Network
- **RLMS** - RTSD Reproduction of Library Materials Section
- **RS** - RTSD Resources Section
- **RTSD** - ALA Resources and Technical Services Division
- **SPEC** - ARL Office of Management Studies Systems and Procedures Exchange Center
- **SS** - RTSD Serials Section
- **TSQ** - Technical Services Quarterly
- **UDC** - Universal Decimal Classification*
- **WLB** - Wilson Library Bulletin
- **WLN** - Western Library Network (formerly Washington Library Network)

*Acronym has been used for both the system and for specific editions of the tool.*
Technical Services in 1984 and 1985: Micrographics, Optical Disk Technology, and Fair Use

Tamara Swora and Audrey Fischer

During 1984 and 1985 the literature abounded with articles, newsletters, and reports about the new information technologies—all in preparation for further implementation of optical disk and related electronic storage and transmission systems. An increasing number of optical disk products appeared, although not great in number and relatively untested. There was a definite trend toward integrated or hybrid systems, from small stand-alone systems to large, mainframe-based document retrieval systems. Optical disk systems based on personal computers were also an important development following the general growth in electronic products and publishing. These new technologies have seriously challenged the definition of fair use, judging from the numerous articles, written by both the user and the proprietary community, calling for a redefinition of the current copyright law.

An important ALA publication appeared which provides much-needed guidance for microform librarians, *Microforms in Libraries* (Spreitzer). Although there was increased activity in the areas of bibliographic control of microforms and preservation microfilming, the past two years were not marked by unusual news in micrographics—except for reevaluations of color microphotography and historical accounts of the ultrafiche. This may indicate that micrographics is a stable technology working toward technical refinements and probable increased use as a storage medium in integrated document delivery systems. There was evidence of less concern about the impact of optical disk technology as the industry looked more optimistically toward future developments. The micrographics industry clearly intends to develop optical disk-compatible systems as well as to promote the need for standards for these emerging technologies. A notable transaction occurred in the industry...
when, after several attempts to sell University Microfilms International throughout 1985, Xerox sold the company to Bell and Howell at year’s end. Given the trend toward integration of technologies, it will be increasingly difficult to separate the literature of micrographics from optical disk and related technologies as has been done for purposes of clarity in this review.

**DEVELOPMENTS IN MICROGRAPHICS**

**ALA AND AIIM Conferences**

During 1984 and 1985 members of RLMS renewed liaisons with other sections and divisions, and the Policy and Research Committee produced a full statement of goals and objectives for the section. The newly established committees on Copying and on Bibliographic Control of Microforms began their work in earnest with the Copying Committee serving as a forum for discussion of developments in photocopying and also working on guidelines for packaging microforms for interlibrary loan; the extensive work of the Bibliographic Control of Microforms Committee will be discussed elsewhere in this review. The work of all other RLMS committees centered on basic, practical matters related to the handling and storage of microforms and also to microform standards. The RLMS Discussion Group considered such ongoing problems as contracting for microform services and obtaining copies from microprint (Ferrarese).

At the 1984 Annual Conference in Dallas, RLMS was highly visible. The section cosponsored a program with PLMS on preservation of audiovisual materials and microforms and also worked with Library Technology Reports in a demonstration exhibit of the LTR face-up copier which generated great interest (Byrnes). The Technology Committee also sponsored a well-attended program with presentations on public-access microcomputers and a report on the LC Optical Disk Pilot Program. The RLMS program at the 1985 Chicago Annual Conference was well received, with a standing-room-only audience there to hear presentations on “Illusions of Longevity? Microforms and Optical Disks in Permanent Library Collections.” The speakers focused on the archival potential of various microformats and also on what is currently known about optical disk longevity. Suzanne Dodson capped all of this activity with her paper on “The International Realm of RLMS,” presented as a part of the RTSD conference program (Dodson 1985b). At the Chicago Conference RLMS presented two resolutions which were supported by the RTSD Board. In the first, both RLMS and PLMS expressed great concern about possible major cuts in the LC preservation microfilming budget; the second requested that a microform project clearinghouse be established at LC under the aegis of the National Preservation Program Office (Dodson 1985b).

The first and second conferences, in 1984–85, held by the American Association for Information and Image Management [AIIM] under its broadened name were highly successful. The 1984 conference showed increased participation on the part of European companies, likely due to
the then high value of the U.S. dollar. The 1985 conference reflected "a resurgence of confidence in micrographics' future with optical disk now seen as a complimentary technology rather than a replacement" ("1985 Micrographics," 3). Program presentations were organized in four tracks: engineering, micrographics, information generalist, and emerging technologies ("1985 AIIM"). In addition to micrographics equipment exhibitors, the participation of fifteen companies with optical disk and image transmission products indicated the wider scope of AIIM, now including all forms of document image-based information products and systems.

Microforms in Libraries

Some reviews of the current status of microform librarianship were published. Sara Eichhorn (1984) found that microform librarianship is now recognized to be a distinct discipline: in order to prompt greater professionalism in this specialized area, more emphasis should be placed on such tasks as developing local bibliographic control tools and actively promoting the use of microforms through bibliographic instruction. To review the status of micrographics instruction for librarians, Rita Murray (1984) surveyed U.S. and Canadian library schools and found that various approaches and course designs are used, but most still do not meet the needs of practicing microform librarians who gain much of their knowledge from workshops and actual experience.

Several articles dealt specifically with microform public service issues. Arthur Tannenbaum's (1984) discussion of "Microforms and Users' Feelings" stressed the need to provide a highly positive user environment, and Danuta Nitecki (1984) presented a thorough analysis of microform interlibrary lending including a comparative study of processing standard interlibrary loan requests versus processing requests for microforms. Hall and Michaels (1985) described a low-cost but high-return plan for routine maintenance of microform viewing equipment including basic steps for cleaning and troubleshooting. Details for a practical, technical enhancement for public-use microform reader-printers were outlined by Henry DuBois in his article "Signal Panel Alerts Users to Reader-Printer Condition" (1984).

In reports from abroad, Dorothy Walker discussed the approach in the United Kingdom to accessioning and storing serials, noting that many libraries have disposed of their hard-copy holdings in favor of purchased film and "one trusts that publishers will treat their master negatives with great care." (Walker, 13) Aderibigbe reinforces the experience of U.S. librarians in his report on microforms in Nigerian libraries by stating "the judicious selection of microformatted materials and the provision of adequate maintenance for the supporting equipment... are of paramount importance" (Aderibigbe, 249).

Guidance in these critical areas was provided in an invaluable ALA publication, Microforms in Libraries: A Manual for Education and Management (Spreitzer), which appeared in 1985 and resulted from the combined work of the RLMS Micropublishing Committee's Subcommittee to Monitor the Quality of Micropublications (chaired by Jack Pontius),
and the RLMS ad hoc Committee to Prepare Guidelines for Operating a Library Microform Reading Facility (chaired by Margaret Byrnes). The publication covers criteria for evaluating the quality of library microforms, public service and collection management issues, training of staff, circulation, and useful appendixes including a glossary, selected list of standards, and a bibliography.

Jean Farrington (1985–86) rightly observed that the most important achievement of the past decade in microform librarianship has been the progress made in the bibliographic control of microforms. Much of this progress was a result of the work of the ARL Microform Project which, after surveying U.S. microform holdings, established a clearinghouse through which libraries planning to catalog microform sets could determine which cataloging data are available. The project achieved its goal, as stated by Jeffrey Heynen, project coordinator, “to facilitate cataloging of titles in microform sets and prevent duplication of effort” (Heynen, 49). The project also coordinated cooperative cataloging of microform sets in OCLC (Whyte), with the RLMS Bibliographic Control of Microforms Committee serving as a forum for these efforts. Cooperative microform cataloging has resulted in the availability of online catalog records for more than 134,000 microform titles. At the 1984 ALA Annual Conference, the Bibliographic Control Committee outlined its future plans, which include support of current microform bibliographic control efforts, development of profile-matching capabilities in the major utilities, and presentation of bibliographic control problems to micropublishers for action (“Dallas”). In an article reviewing the approach of a micropublisher to indexing and cataloging, Stan Schindler (1985) cited specific procedures involved in providing computer-based and hard-copy indexing for collections offered by Research Publications. Linda Hamilton discussed areas in actual microform production and bibliographic control which micropublishers have successfully automated, largely for timely production of guides and indexes. Unfortunately, she reports that there is little incentive for micropublishers to make catalog records available prior to publication because, “those microform collections having excellent bibliographic support sell no better than those having no support” (Hamilton, 168).

**Micropublishing and Preservation Microfilming**

An unusual number of articles covered the history and ultimate fate of the ultrafiche, which many considered “the microform equivalent of the Edsel” (Yerburgh 1984, 255). This discussion was prompted by Mark and Rhoda Yerburgh’s excellent history of the development and production of major ultrafiche collections by Library Resources and NCR and why the concept failed. The reasons cited for failure in the marketplace are lack of an appropriate reader-printer, costly research and development work, and the possibility that the ultrafiche may simply have been a solution in search of a problem. Both Edward Gray (1985) and the Yerburghs (1985) point out in articles which followed that ironically, suitable reader-printers are now available and ultrafiche collections in libraries are still heavily used. In what is both a major micropublishing
and preservation effort, K. G. Saur company began a four-year project in 1984 to film approximately 25 million catalog cards representing 7.5 million titles in the LC main card catalog. The filming is expected to result in about 10,000 microfiche ("K. G. Saur").

Much work was accomplished in 1984-85 toward uniform procedures and standards for preservation, or noncommercial, microfilming—all so that a true national cooperative effort in this area can emerge in the coming years. Helga Borck’s (1985) useful bibliography covering preparation of material for preservation filming was formally published, and Howard Lowell provided a fine overview of preservation microfilming, observing that although fully conforming to all standards is costly, “if the information in the source documents being filmed for preservation purposes is permanently valuable, the costs incurred in strict adherence to archival quality film, processing and storage standards can be justified” (Lowell, 26).

The meetings of the RTSD Preservation Microfilming Committee were increasingly well attended, indicating high interest in this activity. During its 1984 Midwinter Meeting, the committee expressed concern that OCLC become aware of the great need for preservation enhancements similar to those available in RLIN. At the 1984 Annual Conference in Dallas, the committee arranged a program which focused on “Cooperative Preservation Microfilming—Past, Present and Future.” Consideration was given at the 1985 Midwinter Meeting to changing the name of the committee to cover the new technologies clearly (Hendrickson), an issue which was raised again at the Chicago 1985 Annual Conference when William Welsh commented that since micrographics is an established technology, we should not delay dealing with the critical preservation problems in the expectation that microfilm will be replaced by optical digital imaging.

Since preventing duplication of effort through cooperation is essential in preservation microfilming, cooperative programs and approaches were widely discussed. Nancy Gwinn (1985) provided a valuable history of cooperative preservation microfilming programs, charting their steady increase over the past decades and noting that true preservation microfilming projects have replaced those with only an acquisitions objective. Margaret Child (1985) maintained that a centralized national program is now in place, which serves local needs while still contributing to a national effort. LC’s role of sharing technical expertise and experience in preservation microfilming and bibliographic control of microform masters was outlined by William Welsh (1985). The RLG Cooperative Preservation Microfilming Project [CPMP] continues as the premier cooperative effort, with the second phase of the project (1985–87) building on the developmental work of the first phase, which included establishing standards and guidelines in all areas, filming specifications, and bibliographic control through RLIN, and making the resulting records available in a microfiche union list of microform masters (“25,000”). The vital support for this and other preservation microfilming projects by the NEH Preservation Office was discussed by Jeffrey Field (1985). In providing details concerning the types of projects the
office is likely to support, he mentioned that cooperative projects are being greatly encouraged. Information from the ARL Preservation Survey (conducted as a part of the ARL Microform Project) has been submitted to NEH and will be used in part to promote cooperative preservation filming.

Given the increasing number of preservation microfilming projects and the need for further training in this area, the RLMS Committee on Regional Programs planned a series of preservation microfilming institutes, the first of which was held at LC on March 6–7, 1986. This institute was aimed at administrators and previewed the "Manual for Preservation Filming." Planning has also begun for the second institute, which will serve the more technical needs of supervisory and operations staff in a preservation microfilming program.

Several reports of ongoing preservation microfilming programs at various institutions appeared, including a description of the large-scale filming effort at LC which combines the work of the Preservation Microfilming Office and the Photoduplication Service. Lawrence Robinson provided details concerning the LC approach to selection and review of material prior to filming, stating that they "may be the most critical aspects of the process, since such decisions will have to be made irrespective of what technology is used" (Robinson, 239). Jay Brown (1985) provided additional information about the LC program, and details concerning LC preservation microfilming of music materials were also reported ("Music"). Various aspects of the important program at the New York Public Library [NYPL] were discussed with Gail Persky (1984) reporting on the NYPL Mellon Microform Masters Project, which included inspection of existing negatives and subsequent creation of records in RLIN. Thomas Bourke (1984) described the production of a microfiche register of NYPL masters, and Alice Dowd (1985) provided a fine overview of the various decisions that must be made prior to preservation filming of a major collection. The extensive experience at the Genealogical Library of the Church of the Latter-day Saints was described by David Mayfield (1985).

In the area of preservation microfilming of government publications and archives, filming of document collections largely for distribution purposes was covered (Lane, Jacobsen). Major assessments of the history and current status of the microfilming program at the National Archives and Records Administration [NARA] were published (Calmes, Warner), with Alan Calmes reporting that NARA managers still have not accepted microform as a preservation medium, but only as a distribution method, and Robert Warner suggested that greater agreement is needed on what is meant by "archival." A NARA pilot filming project was described by Brenda Kepley and Richard Yous (1984).

All of these labor-intensive efforts will serve national preservation needs, since "microfilming is probably the best researched, planned and coordinated of all preservation activities" (Merrill-Oldham, 771), and "fortunately it seems likely that the microforms created today will be relatively easily replicated by the next stage of technology. In short, our
current efforts will probably not be wasted no matter what follows microfilm” (Child, 95).

**MICROGRAPHICS TECHNICAL DEVELOPMENTS AND STANDARDS**

Two fine primers in the field of micrographics were published in 1985. William Saffady (1985) provided a comprehensive second edition to his 1978 publication *Micrographics*. The text is “designed for practicing librarians and library school students who want a systematic presentation of basic facets of micrographics as applied to library work” (Saffady, xi). It provides broad coverage of micrographics, including microform types, production, and COM, with updated information in the areas of microform equipment, bibliographic control, and the new technologies. In his *Manual of Document Microphotography*, Michael Gunn (1985b) provided a history of microphotography and a discussion of microform types and their physical characteristics, emphasizing the importance of the environment in which microforms are produced.

Suzanne Dodson (1985a) made a valuable contribution to micrographics literature with her description of various film types and suggestions for making an informed decision when purchasing service copies. Dodson discussed the reaction of each film type (silver, diazo and vesicular) to light, heat, humidity, and handling; the potential longevity of each type, and the storage conditions required to achieve the promised longevity. The importance of evaluating use patterns is stressed, and she concludes that for microforms which are to be retained and used indefinitely, “silver-gelatin film is the only film type for which archival standards exist” (Dodson 1985a, 96).

Stephen Wood discussed advances in optical reformatting made by UMF Systems, specifically reformatting to ultrafiche, concluding that often “we must contend with . . . the fact that input films were created as an end goal in themselves; there was no thought that the image would be optically reduced to microfiche” (Wood, 183). B. A. Willems (1985) also described reformatting done by a Dutch service bureau and its use of a camera which they developed for filming newspapers directly to microfiche at 38x.

Several articles dealt with advances in color microfilming. Ernest Taubes provided a brief history of color photography and pointed out that until three years ago, “all color processes producing color transparencies required three and four emulsions on top of each other and, therefore, the high resolution requirements of color microphotography could not be achieved” (Taubes, 166). However, he felt that improved techniques and chemicals have now made color microphotography viable, citing Kodachrome and Ilford-Cibachrome as the two commercially available color microfilms with an acceptable archival longevity. John Grimaldi (1984) similarly stressed the viability of color microfiche, including those which are COM-generated. He noted that he does not believe videodisc technology will replace microfilm in the near future. Ted Hodur (1985) provided a comprehensive overview of the capabilities
and drawbacks of color micrographics, as well as its potential in integrated systems. Michael Gunn (1985a) also discussed the history of and recent advances in color micrographics against a backdrop of the problems associated with this technology. While he is optimistic about its potential, he did point out that while the working paper "Recommended Practices for the Production and Handling of Color Microforms" resulted from the May 1980 ISO annual conference, five years have elapsed since the initial proposal was made—still with no sign of an agreed standard (Gunn 1985a, 23).

In the area of standards, Whitney Minkler and Robert Starbird reminded us that micrographic image production is a precise process which requires absolute control to achieve archival quality (Minkler, 30). Harry Kidd (1984) described AIIM's role in the development and promotion of standards in three basic areas: products, quality control, and photographic techniques. He also reported that a revision of the ANSI standard for microfiche—ANSI/AIIM MS5 1985—was approved and that now there is only one microfiche format standard covering both COM and source document fiche. In a report on the fifth meeting of the ISO, Don Avedon (1985) noted that Technical Committee 171 changed its name from "Micrographics" to "Document and Image Based Information Systems" in order to include optical-disk storage technology. Avedon also lists all currently approved and published ISO standards, including those still in progress.

**Microform and Copying Equipment**

Various reviews of micrographics equipment and document storage systems appeared in *Reprographics Quarterly* and thereafter, when its title changed, in *Information Media & Technology*. The reviews are listed under these sources in the bibliography. In addition to this coverage, Tony Hendley (1984) provided an extensive survey of and specifications for available microfiche cameras including low-cost convenience cameras, production cameras, and updatable systems.

In an informative article covering laser printing technology, contributed by Eric Norman-Wilson (1984–85), design factors which may influence selection of a printer are discussed, and a full list of available laser printers is given. Considerable progress was made in the development of a nondamaging book copier. Howard White (1984) reported on the developments leading to the design and the hope for manufacture of the LTR face-up copier, which was supported by an NEH grant and demonstrated at the 1984 ALA Dallas Conference. While the design and capabilities of the Selectec Duo face-up copier developed for the British Library were reviewed by Bernard Williams ("Information" 1985b), the copier appeared in the U.S. in a 1986 ALA Midwinter exhibit as the "Archivist," produced by Select Information Systems. A parallel effort on the part of the British Library has prompted the design of a nondamaging digital copier by Optronics which is currently in use at that library (Wearden). Further reviews and surveys of telefacsimile equipment and experiments also appeared (Bennett, Boss, Cawkell, "A Survey").
Within the past two years, many so-called hybrid document storage and retrieval systems have been made available. Tony Hendley has termed such systems "videomicrographic" and considers them to be a "bridge from today's micrographic based systems to electronic systems which make use of various media for truly integrated systems" (Hendley 1985, 112). Currently they integrate micrographic image storage with electronic image transmission and display, but in the future the storage medium for some applications may be optical disk. Examples of such proliferating systems are the recently developed Kodak KIMS system (Hendley 1985); the Rank Cintel Retriever system (Hendley 1985); and the Access 2010 system (Neumeier). Since such systems will be increasingly complex, system integrators—those who are responsible for design and installation of systems using a variety of storage media and equipment—become increasingly important; their role is discussed in a fine article by Robert Kalthoff (1985). Patricia McDonnell (1985) reported on the CASPIR system designed for the U.S. Patent and Trademark Office, which uses ultrastrips (175x reduction, 35 mm x 200 mm) for information storage and a CAR system for retrieval. Since all such systems are new applications, Colin Brown (1985) speculated that these developments may actually serve to widen the micrographics market, and Dale Rupp (1985) suggested that even when optical disk systems become a reality, microforms may still be used for very remote distribution.

**MICROGRAPHICS BIBLIOGRAPHY**


"1985 AIIM Show Breaks All Records." 1985 fyi/im 1:1, 4 (June).


Rupp, Dale O. 1985. "Active Micrographics Systems: Engineering Link to the Fu-
There was an upsurge in conferences and seminars providing either basic introductions to optical disk and related technologies or updates concerning the often rapid technical advances and evolving applications. Proliferating and very costly newsletters and reports promise timely information and future forecasts about this steady technical evolution. Such newsletters include the highly technical *Optical Memory News*, which primarily covers digital equipment, standards and preservation issues; *CD Data Report*, which focuses on the compact disk [CD] and compact disk read only memory [CD-ROM]; *Videodisc Monitor*, which highlights videodisc applications; the Elsevier publication *Data Storage Report*, covering a variety of optical recording media; and *Videodisc and Optical Disk Update*, the newsletter companion to the journal *Videodisc and Optical Disk*. The latter reported primarily on interactive videodisc, probably because few applications of digital image storage have become operational. For those who are developing optical disk systems, maintaining current knowledge of the technologies is essential but consulting some of these sources should be done with the understanding that some marketing information and industry rumor are included.
Publishers of the newsletters frequently held sponsored conferences and also produced some extremely expensive state-of-the-art reports. For example, Venture Development Corporation offered a report priced at $2,970 covering "Micrographics and Optical Digital Systems, 1985–1990" ("News" 438). Some of the largest technical conferences were and continue to be held all over the globe by Rothchild Consultants, publishers of Optical Memory News, and Meckler Publishing has held annual conferences on optical storage technology as well as a post-ALA 1985 Annual Conference seminar on "Laser Technology and Optical Publishing: Implications for Libraries." As the use of microform imaging has become widespread, librarians and other archivists have become acquainted with some of the technical literature of photography; now, increasingly, the technical literature of other engineering professions may have to be reviewed, as inevitable future cooperation with these professions occurs in the development of optical disk systems.

**OPTICAL DISK TECHNOLOGY AND SYSTEMS**

Many articles and texts appeared which will not be quickly outdated as the technology evolves because they provide basic technical information. Some of those aimed at a more general or lay audience are Bernard Jones' (1985) clear presentation of electronic capture, storage, and retrieval of individual image picture elements and Linda Helgerson's (1984) important overview of optical digital data disk technology with some discussion of public- and private-sector applications. Other overview articles were written by Monique LaRouche-McClemens (1985) and Julie Schwerin (1985a). Larry Fugitani (1984) contrasted optical disk and magnetic media and included descriptions of how their use may be combined and how data is encoded or written onto optical disks. He also observed that the much-heralded development of erasable disks may not be as important as has been thought because there appear to be many archival-type applications for nonerasable disks. Media selection was also discussed by Paul Artlip, who acknowledged that "optical disk technology pairs unmatched data compaction capabilities with high speed random access retrieval" (p. 21), and that the serial searching required by microforms will continue to limit their use in certain applications. In Robert Williams' (1985) overview of electronic document management, he rightfully notes that the computer requirements of optical disk technology will change the role of information providers from passive custodians to those who must be dynamically involved with the information. In several articles, Gerald Walter discussed the advantages of computerized document image processing and compared the storage capacities of various media (1985a). He also discussed differences between digital disk and CAR systems—the speed of the former is critical—and reinforced the fact that any kind of microform, irrespective of reinforced ratio, can be digitized (1985a). Snyder (1984) provided a cost-benefit analysis for types of document storage, and M. Gawdun (1984) and Christine Oliver (1985) stressed the importance of electronic transmission capabilities of optical digital disk systems and some of the system-design pitfalls to avoid in order to achieve a timely flow of data.
Further basic information was conveyed in more lengthy overviews, basic texts, and conference proceedings. The conference reports of the Society of Photo-Optical Instrumentation Engineers (SPIE) cover technical details of various aspects of optical disk systems which will be comprehensible to those with a background in micrographics. Jordan Isailović (1985) offered basic principles of optical digital disk and videodisc technology as did Tony Hendley (1985), who also included a review of current and future applications and speculated on the markets envisioned for each medium—microform, magnetic, and optical disk. His report, published by Cimtech, is to be followed by further reports on optical disk technology.

William Saffady, in Optical Disks 1985: A State of the Art Review, rightly observes that “optical disk technology is widely assumed to be better developed than it is” (1985a, 4), but still feels that investment will reach the level of billions of dollars by 1990. The consumer advocate for Optical Memory News, using the nom de plume “Prime Evil,” concurs with the view that there is a disparity between industry marketing and reality, stating that “some optical disk developers have made outrageous claims and are preying on the technical naivete of customers” (Prime, 19).

Two reports served to demystify the technology for the library community. A CLR-commissioned report provided basic technical information and considered the potential of the technology for libraries. Although the report concludes that optical disk technology will be suitable for the library environment, “like the technologies which have preceded them, the optical media are not panaceas,” and thoughtful attention must be given to the design of retrieval tools in such systems (Information, 10). John R. White’s report is “intended to provide basic guidelines to those concerned with the storage characteristics of a broad range of recording media” (White, iii). He touches on the important issue of preservation or longevity of optical disks, advising that even though error-detection coding on disks will signal the need for recopying, “until such time as disk technologies move from research and development to mass production and creditable test methods and procedures are developed, users of such systems would be well advised to accept manufacturers’ claims of life expectancy with some caution” (White, 46). Given current unconfirmed predictions of longevity, and the general difficulty of archiving all machine-readable records, the NARA Committee on Preservation issued recommendations for a long-range plan for storage and retrieval of all records deposited with NARA, concluding that a plan based on human-readable microforms provides the least risk for all media (National 1984).

Other optical storage methods were also covered, such as the Lasercard™, a plastic, credit-type card containing a strip of optical reflective material on which data can be stored (Barnes). A full discussion of the Drexon encoding method used in these cards was provided by Julie Schwerin (1985c) with the prediction that they would be widely used in 1986. Compact audio discs and some other disk types were discussed by John Free (1985). A sophisticated optical character recognition [OCR] system originally developed for NASA space image analysis, and now
also used to scan library catalog cards, was discussed (Electronic). Some systems using only digital disk storage were reviewed. Tony Hendley covered the versatile FileNet system whose workstation “can simultaneously display actual document images in one window, data and text in another window and interaction with a mainframe in another window” (1984/85, 22). This system uses the FileNet jukebox storage module. The prototype SONY integrated office system [SOIS], which uses write-once disks as a storage medium, was unveiled (DIAG).

Publications that emphasized the concepts behind videodisc technology, which stores continuous data for display on a standard TV monitor, appeared with great frequency, possibly reflecting the maturity of this off-the-shelf technology. William Saffady’s study of Video Based Information Systems (1985b) serves as a basic primer and includes extensive discussions of conventional television broadcast systems, high-definition television, videodisc, videotex, and other permutations of the technology. He noted that although high-definition television is technically possible, and may be used in closed, local systems, the current U.S. broadcast signal is incapable of carrying the increased amount of data required (1985b, 20). Lloyd Troeltzsch (1984) described the technical considerations of videodisc premastering, stressing that such planning is the most costly and important aspect of disk production and retrieval design. He also summarized videodisc types and retrieval options. An interview with David Davies revealed some of the important activities of the 3M Corporation in this area (Surpremant). Techniques used to store text images on analog videodisc are described by Julie Schwerin (1984), and a comparison of analog videodisc and digital disk storage was provided by David Hessler (1984). To allow for graphics communication, a transmission standard for North America—NAPLPS [North American Presentation Level Protocol Syntax]—a computer coding method, was developed (Hurley). The capability to reproduce images from a standard TV screen onto photographic film was described in great detail by Okuda and Ohno (1985). Videodisc encoding and decoding techniques developed by Laser Data, allowing for a combination of video, digital, and audio information on a videodisc, were discussed by Bryan Lewis (1985), and guidelines for combining audio and video material in disk design were provided by James Wheaton (1984). A system, developed by UMI, which receives, stores, and transmits image data using a videodisc was reported (“UMI”). The technique of digital to analog conversion and storage which permits high-capacity storage of digital data on an analog videodisc was used in many projects, including that at the National Library of Medicine (Urrows, 1984). Increased use of videodisc technology for archival materials was reported by Dominic Nghiep Cong Bui (Nghiep), who concluded that such projects are thwarted by the staggering amount of material in need of transfer and a general lack of machine indexing for archival material. He also discussed the LC Non-Print Videodisc Project and a project at the National Archives of Canada covered in greater detail by Sabine Sonnemann (1984), who stepped through the entire process of disk production. She believes that not only is the videodisc a viable, user-friendly research tool
but also that an important by-product of such projects is the technical experience they provide library staff. Rebecca Sturm concurred with this view, since "videodiscs and computers offer too much learning and storage capabilities for libraries to ignore" (Sturm, 45). Judy Olsen (1984) described techniques in experimenting with videodisc map storage, pointing out that cartographers are now often modifying new map designs so that they may be more suitably transferred to videodiscs in the future. However, the disadvantages of poor resolution remain and for such applications, the videodisc must be considered "an intermediate technology in the transfer from the paper map to the digital map" (Olsen, 27). Videodiscs have supplanted a microfiche-based system used by the Jet Propulsion Laboratory for storage of images of planetary exploration transmitted back from space probes ("Interrelated"). Mary Tonne Schaefer (1985) affirmed the importance of laser videodisc technology and discussed applications, and George Abbott (1985) proposed that since library media centers have been incorporating developing technologies, they are the natural custodians for all types of videodiscs of library materials.

OPTICAL DIGITAL DISK APPLICATIONS

The years 1984–85 witnessed an increase in the applied use of both digital and analog technologies, particularly large system applications in government agencies. In October 1984, NARA issued a Technology Assessment Report citing severe preservation, public access, and space problems for records held in a variety of formats, prompting it to consider the new technologies in order to solve these problems. Several technologies such as speech pattern and optical character recognition and digital raster scanning were carefully assessed. The report concluded that the use of optical digital imaging could prove an efficient method for NARA to store and retrieve data and recommended a pilot study (National 1985b).

Another research project was scheduled to begin in June 1985 to determine if optical digital technology is feasible for use at the Internal Revenue Service (Urrows 1985). The project, known as FAISR [Files Archival Image Storage and Retrieval], will also benefit NARA, which is currently the depository for all 941 and 1040 forms that IRS proposes to scan onto digital disks (Urrows 1985). Another digital application is Eurodoctel, a document delivery service which began in February 1985. This experiment, supported by the Commission of the European Communities, is an online current-awareness service based on videotex and a document delivery network with some material stored on optical digital disks. The program places particular emphasis on user needs and has stressed soliciting user reactions throughout the project's development ("Challenge").

In the federal sector further evidence of wide interest in optical disk applications was the formation of the Digital Image Applications Group [DIAG], sponsored by the National Archives, early in 1984 (Urrows 1985). "DIAG was established to provide for and assist in the dissemination and exchange of information and ideas regarding applications in-
volving the conversion of human readable images to digital formats, storing and retrieving them” (Urrows 1985, 204). The group meets regularly and consists of approximately 350 members from both the federal and vendor communities as well as a small nonfederal representation.

“Across the federal terrain, the Library of Congress appears to be in the vanguard of practical users of optical disk technology” (Urrows 1985, 207). Early developments and expectations of the LC program were discussed by Thompson (1984). Joseph Price (1984), director of the Optical Disk Program, provided the most complete description of the full range of optical disk experimentation being done at LC. His article provides information concerning both the digital and analog projects covering selection of material, system specifications, and the program’s management structure. The LC print or digital disk system was opened to the public in January 1986 and at that time the database included the text of about 4,000 articles and government documents. Deputy Librarian of Congress William Welsh, a firm supporter of the potential for optical disk technology to resolve library storage, access, and preservation problems, observed that the digital system jukebox which provides access to material stored on disks, “is the best technology we have today for compact storage and retrieval. It offers random access. It’s interdepartmental in organization. It seems permanent as a storage medium and makes perfect copies. . . . An item can be shared simultaneously and remotely. It puts an end to the not-on-shelf problem forever” (Plotnick, 769). Both Felix Krayeski (1984) and William Nugent (1984) discussed the program; Nugent pointed to future technological advances in optical disk technology.

As part of the pilot program, LC is also engaged in preservation testing of optical disks. In a presentation at the RLMS Annual Conference program in Chicago, Tamara Swora (1985) noted that LC is working on design and implementation of a digital disk test facility in order to perform physical and electronic tests on various types of optical disks. Thereafter a strategy can be developed to monitor the long-term accuracy of encoded data in order to rewrite all information to new disks well in advance of any data degradation.

ANALOG VIDEODISC AND CD-ROM APPLICATIONS

“On June 15 [1984], the Library of Congress made available to users the first of six analog video disks produced during the initial phase of its Optical Disk Pilot Program” (Analog, 209). With workstations now located in the Prints and Photographs and Motion Picture Reading Rooms, patrons can now access thousands of photographs, posters, architectural drawings, and motion-picture stills from LC’s vast collections (Analog). Preservation, service, and access will be greatly improved with the use of this technology, according to Elisabeth Betz Parker, who noted that “access to these collections is cumbersome . . . each handling of the material accelerates its destruction” (Parker, 1985b). To alleviate such problems, selected collections have been transferred to videodisc, and information about each image is made available to users through captions “which may be thought of as abbreviated
MARC records listing information about a picture’’ (Fleischhauer, 337). In an article fully discussing the system’s unique retrieval approach, Parker noted that “the last refinement to the system will be to create an actual link between the microcomputer and the videodisk” (Parker 1985a, 11).

In an article entitled “Direct Document Capture and Full Text Indexing: An Introduction to the Air and Space Museum System,’’ Walter Boyne and Hernan Otano (1984) introduce the museum’s program to transfer and distribute its photographic collections on videodisc. More than 200,000 photographs are currently available, and the museum is working toward creation of a ten-disc set of 1,000,000 photographs, all at a purchase cost of $350, a price that clearly demonstrates the cost-effectiveness of this technology for distribution of information. After extensive investigation Boyne and Otano have patented and hope to market another prototype system which digitizes page text, uses character image recognition software to convert the image file to standard ASCII code, and thereafter enables retrieval of information from scanned text through key-word searching (Boyne). Michael Hill (1985) discussed a collaborative effort of the U.S. Japanese, and European Patent Offices to ultimately make all patent information available, primarily using videodisc technology. Hill notes that the aim of the project is to automate all internal U.S. operations by 1987 and to achieve international access via telecommunications channels by 1990. In an article entitled “Evaluating Laser Videodisc Technology for the Dissemination of Agricultural Information,’’ Pamela Andre (1985) discussed the project at the National Agriculture Library using interactive videodiscs for storage and distribution of full-text agriculture databases, namely, the Pork Industry Handbook and AGRICOLA records. The videodisc produced by the project stores text, graphics, and bibliographic data. Andre reports candidly about various problems encountered in developing the system, along with the interesting technical solutions found by working closely with the vendor, Laserdata.

An optical disk storage medium which developed from the highly successful digital compact audio disk [CD] is the 4 3/4-inch CD-ROM [Compact Disk-Read Only Memory], on which any type of digitally encoded data can be stored. Judith Paris Roth provided a comprehensive source of information concerning this medium in the Essential Guide to CD-ROM (1985), and Brower Murphy covered its development in “CD-ROM and Libraries” (1985). Since CD-ROMs can store large amounts of data inexpensively, as can analog videodiscs after digital to analog conversion is done, both are well suited to the distribution of bibliographic information. As a result there has been a sharp increase in the use of these media (“Firms”). The advantages of a CD-ROM or videodisc database are clear, since they “eliminate costly telecommunications charges . . . and access is available at all hours” (Melin). They allow greater control over databases with fixed costs, and response times are decreased (Gale). Given the potential impact of such changes in the online database market, publishers have had some difficulty deciding what are appropriate charges for such stand-alone databases. As pub-
Publishers offer CD-ROM databases, differing marketing strategies are being employed. Parke Lightbrown (1985) described the ISIS Silverplatter™ Service, which provides a number of databases on CD-ROM by subscription and updates them thereafter. The company is considering a novel cooperative solution to deal with superceded CD-ROMs in its "secondary use program," in which those receiving updated disks would pass their originals on to smaller institutions. Richard Carney (1985a, 1985b) discussed InfoTrac, IAC [Information Access Company] indexes stored and distributed on videodisc. IAC views this system as a supplement to rather than a replacement for their COM and online indexes. The system can be accessed by multiple users, and the annual subscription covers all hardware, software, and maintenance (Aveney).

In the race to provide LC MARC data on CD-ROM or videodisc, several companies have emerged, among them MINIMARC and Bibliofile. The latter offers more than 1,400,000 MARC records on two CD-ROMs (Murphy). The MINI MARC LC database was previously distributed on floppy diskettes now replaced by two 12-inch videodiscs which are cumulated twice monthly (Pezzanite). Both companies also offer services for publishing corporate or library private files and records on CD-ROM ("Optical Disc-Based"). The LC Cataloging and Distribution Service also is investigating the use of CD-ROM for distribution of its records with a design contract awarded in 1985 for preliminary planning of a pilot project ("Online"). Brodart, also in 1985, introduced its LePac™ system [Local Public Access Catalog], which uses CD-ROM storage to replace COM and online catalogs for local library collections and can provide access to outside databases. Some predictions concerning the future of CD-ROM technology were made by Mary Ann O'Connor (1985), who thought that, when developed, an erasable CD-ROM would replace floppy disks and that CD-ROM would not be used as a storage medium but rather to distribute large programs and data, much as the development to date has shown.

**Developments in Optical Disk Standards**

Some reassuring progress was made toward the formulation of the various standards needed for proliferating types of optical disk media to allow for compatibility and interchangeability. A number of ANSI groups are continuing to work toward achieving these goals. The ANSI Technical Committee X3B11 focuses on standards for recording, reading systems, and other devices associated with optical digital disks ("Library Host") with a Subcommittee on Electronic Error Detection and Correction [EDAC]. The subcommittee met at LC, which is "supporting strong EDAC standards for optical disks as these directly affect both the longevity of the disks and the capability for error-free rerecording when aging effects begin to approach the limits of the error correction systems." ("Optical Disk Standards," 284). Further characteristics being reviewed by the ANSI groups were enumerated by Henry and Elizabeth Urrows (1985).

The SONY and Phillips corporations in 1980 set a de facto standard
for compact audio disk recording and engineering, a standard that relates also to CD-ROM recording. However, standards for information file layout, to allow for interchangeability of information databases on CD-ROM disks between systems using different hardware and software, are critically needed because such products are already on the market ("Compact," 257). Toward this end, a NISO meeting was held at LC to consider a recommended standard ("Progress"); late in 1985, three different groups were working on this standard, and vendors were moving toward a de facto file format standard which NISO was to consider at a February 1986 meeting.

**Electronic Publishing**

D. I. Raitt's broad but useful definition of this newest development in the publishing world characterizes electronic publishing as the "preparation and dissemination of information primarily textual and graphic using computers, telecommunications and terminals" and with storage likely on optical disk media (Raitt, 199). Since this development is of critical importance to publishers, the Association of American Publishers and CLR cosponsored the Electronic Manuscript Project, which ended in early 1984. The project surveyed the status of electronic publishing with the goal of prompting "an industry standard and set of guidelines for preparing and processing manuscripts on a computer," (Association, 1) that would ease the transfer of electronic manuscripts. Some results of the survey are surprising: "nearly 60% of publishers expect to request authors to submit manuscripts electronically in 1985," and "80% of authors expect to prepare their manuscripts electronically in 1985" (Association, 6). Although the focus of the project was to resolve technical problems, John Gurnsey (1985) pointed out in a related article that the technical problems are more easily solved than the social, legal, copyright, and financial implications.

The latter influence the speed of development far more than technical issues, particularly since legal definitions are based on the physical carrier of information rather than the information itself. F. W. Lancaster (1985) reflected that the progress being made toward electronic publication is far faster than he had earlier predicted. He also pointed out that although authors are producing electronic manuscripts, the subtle distinction still exists: their purpose is ultimately to produce a printed page rather than electronic data. Julie Schwerin (1985b) encouraged publishers to take advantage of electronic formats and optical media, since these will allow for greater control over the distribution of their products and for royalty fee collection. Greater control, at least in part, gave an impetus to the ADONIS project, which was to disseminate periodicals possibly stored on optical disk. Jeffrey Saldinger (1984) reported that potential users were not supportive of the project because they felt there would be long delivery times.

Possible electronic transmission of publications in the future will most definitely affect libraries, and various articles speculated on these changes or reported on developments. Otto ter Haar (1985) discussed the effect of electronic publishing on the future of scientific journals, and
Goodrum and Dalrymple (1985) proposed fanciful electronic forms for books in the future. The increased availability of online full-text newspapers was discussed by Newcombe and Trivedi (1984), who raised the important issue of copyright. The possible effect of the new technologies on scholarly publishing was discussed by Tomajko and Drake (1985), and details concerning plans to publish an electronic magazine in Europe were reported by Harry Collier (1984), including a fee structure to include a charge for review of specific articles and news items. The first electronic book was scheduled to be published abroad in Germany in 1985 (Gurnsey, 104). Some important observations concerning the impact of electronic publishing on libraries were made throughout the literature, for example, ter Haar’s comment that “libraries are likely to play an equal or greater role than at present in the provision of access mechanisms and hard copy to end users” (ter Haar, 77); or Raitt’s concern (1985) that the impact on serials publishing may be greater than on any other format since there may be a trend toward providing single articles rather than conventional issues; or the statement that “for libraries, electronic publishing raises the question of strategy—how much to charge and how much to subsidize” (“Impact,” 292).

Some discussion of the effect of electronic publishing on the delivery of government publications appeared. The Committee on the Records of Government reported the magnitude of the increase in electronic material: “by 1983 75% of all government information was originated or manipulated electronically” (Committee, 90), a growth in density, not in cubic feet. The feasibility of delivering this burgeoning amount of electronic data and publications to depository libraries was explored by the Joint Committee on Printing, who concluded, after a survey of libraries, that the same equal access must be offered to electronic information as has been provided for paper and microform (U.S. Congress). Further problems involved in electronic filing of documents were discussed by Glenn English (1985).

**Future Developments in the Technologies**

The increased interest in the technology during these past years was apparent from the orders placed for optical disk-based systems in 1984, which exceeded $180,000,000 (Kalthoff, 19). Continued concern about archival longevity and, also, use of optical disk as legal evidence may slow its widespread application but should not cause a rejection of the important capabilities which optical disk systems offer. Watching developments in the stability and longevity of write-once nonerasable disks will be important for the library and archive communities, since this particular medium may replace micrographics in the storage of some types of documents. It seems clear that the increased use of CD-ROM will change patterns of access to existing online databases and abstracting and indexing services and will have great impact on electronic publishing.

As the issue of the new technologies versus microform continued to be discussed, many thoughtful observations were made. “Integration” was the key word in the literature along with “hybrid,” and both as-
sume that present and future technologies will coexist and be actively incorporated to provide flexibility in large systems. Such systems are highly versatile and can be limited only by financial and staff resources. William Saffady considers "the optical disk as a variant form of micrographics with considerable potential in some but not all document storage applications leaving much continued scope for the roll and flat microforms" (1985a, 4). The initial "crisis mentality" in the micrographics industry has shifted to a more pragmatic assessment, given huge retrospective film inventories and the steady production of preservation microfilm. Clearly, various applications still remain for microforms. Industry leaders went so far as to welcome optical disk systems because they will stimulate need by encouraging all users to more closely scrutinize available storage options, including microform ("Reflections"). There is also the possibility that the prospect of future transfer from film to optical disk may prompt greater quality in current microform production. The increased use of all types of storage systems for future document delivery was explored by Peter Ashby (1985). D. P. Moody (1984) reflected that the large amount and high complexity of hardware and software required at both the input and retrieval ends of an optical disk system may mean that current mature technologies will survive, with microform still providing inexpensive offline storage. Ker (1985) agrees that microfilm is the more cost-effective medium at this time. Gail Pennix reminded everyone that "updatable film, storage of color documents, magnetic annotation on film, and digital recording on film are existing features of film that have yet to be fully exploited" (Pennix, 27).

In summary, the use of optical disk technology and its integration with existing technologies has been characterized in the past years by research and development, and the coming years will be marked by practical implementation.

**OPTICAL DISK AND RELATED TECHNOLOGIES**

**BIBLIOGRAPHY**


Library Host to Standards Meeting on Optical Disk Technology,” 1985. LCIB 44:177-78 (July 15).


"UMI to Distribute Optical Disk Databases." 1985. fyi/im 1, no. 12.2.5.


FAIR USE

The debate over the meaning and impact of the 1976 Copyright Revision Act continued. Nearly eight years after its implementation date, January 1, 1978, both copyright owners and users continued to lobby for their respective interpretations of Section 108 [Fair Use], reaching no agreement except mutual confusion, and yet at least engaging in constructive dialogue.

THE PUBLISHERS AND LIBRARIANS

A "foundation for dialogue" between publishers and librarians was the subject of the forty-second conference of the Graduate Library School at the University of Chicago (Ashem). At least two central ideas permeated the conference: the need for both publishers, i.e., the copyright proprietors, and librarians, i.e., the users, who share the goal of disseminating information, to understand and accept their mutual dependence and to recognize the ways in which the new technologies will radically alter the shape of both professions in the coming decades. While many of the publishers such as Frederick A. Praeger expressed their concern that "new technology makes it possible for scholars to gain
distribution of their works while bypassing publishers” (Praeger, 21), Jay Lucker, director of libraries at the Massachusetts Institute of Technology, similarly pointed out “a growing concern within the library community about libraries and librarians being ‘frozen out’ of the new information age” (Lucker, 49). On the other hand, publisher Peter F. Urbach expressed his belief that “the solutions to the problems lie with the new technology” (Urbach, 31), and Charles B. Osburn of the University of Cincinnati Library echoed that “technology offers the promise of successful cooperative ventures” in an era of shrinking library budgets (Osburn, 87). It can, therefore, be concluded that opinion on the subject of fair use and the new technologies was not unilaterally expressed by the publishers and the librarians at this conference. All agreed that further dialogue of this nature will be necessary if both communities are to work together toward the end of providing information to the public.

COPYRIGHT LAW INTERPRETATIONS IN THE UNITED STATES AND ABROAD

As further indication of a lack of clarity on the subject of fair use in the 1976 Copyright Revision Act, numerous articles attempted to analyze and interpret its true intent. Most of these were written by librarians struggling to understand their role in enforcing the law while meeting the needs of their patrons. Attorney Patricia A. Anderson reviewed “Librarians’ Rights and Responsibilities Under the Copyright Law,” pointing out that “when it appeared that there were no dire life-affecting changes coming out of the new law, most librarians continued following the same practices that they had always followed” (Anderson, 305). However, one new practice was added—posting a copyright notice over the photocopy machine.

In discussing implementation of the new copyright law by academic libraries, William Green, University of Kentucky, noted that “highly decentralized policy implementation occurred by default . . . what copyright has come to mean has depended upon the decision individual libraries have made to comply with the statute” (Green, 5). Such diversities in implementation thus run the gamut from maintaining “sentry duty at the copying machine” (Toohey, 27) to making “only minor operational changes consistent with their interpretation of educational fair use” (Green, 6).

Jean Koch (1985) of the Urbana Free Library provided a comprehensive and balanced analysis of the Copyright Revision Act of 1976 in her article entitled “Copyright: Fair Use Under the Law.” Illuminating the positions of the various concerned parties, Koch noted that ALA believes that the present law, in most cases, is serving the interests of copyright proprietors (because revenues have increased) and of users (because access to information has not been denied). However, she noted that ALA also considers the 1983 register of copyrights Report—a five-year assessment of the effects of the new law—(Report) favorable to the position of copyright owners and proprietors, despite the fact that the King Research report on “Libraries, Publishers and Photocopying”
(conducted for the U.S. Copyright Office) claimed that a balance between both positions had been achieved (McDonald). Meredith A. Butler similarly concluded that "the overriding impression one is left with after reading the register's report is that it lacks balance and clarity ... proprietary interests take precedence over user rights and needs" (Butler, 34-35).

Ivan R. Bender (1985), copyright attorney and expert on educational use of copyrighted works, attempted to enumerate the responsibilities of media librarians under the new law by reviewing the sections of the law which deal specifically with fair use. He concluded that "those engaged in the creation of intellectual works and those who use them in academic activities are bound together in a symbiotic manner ... we must, therefore, always be cognizant of each other's needs, and copyright law represents a decent compromise of all the interests affected by it" (Bender, 109). Conversely, publishers Irving Louis Horowitz and Mary Curtis concluded that "the 1976 Copyright Law revision gives specific recognition to fair use, and since then, the concept has been transformed from a rule of reason into a loophole, a rationale for free and virtually unrestricted use of copyright material ... legal abuses have become social norms (Horowitz, 68).

In a bold article entitled "The Only Copyright Law We Need," attorney Daniel Toohey reminded us that "Samuel Clemens once said that the only thing God couldn't do was to find any sense in the copyright law" (Toohey, 27). On a more serious note, Toohey pointed out that "as new technologies enter the marketplace and new economic relationships among users and creators are formed, the traditional administrators of copyright law, Congress and the court, struggle in vain to keep up (Toohey, 27). To resolve the problem, he recommended the establishment of a Federal Copyright Agency, not unlike the Federal Communications Commission. According to Toohey, the Federal Copyright Agency could "design standards for application of fair copyright principles through regulation and adjudication ... clarify much of the present confusion about copyright by issuing policy statements and opinions ... respond more speedily than Congress to strike the important balance between creators and users ... adjudicate disputes arising under the copyright law, relieving federal courts of the obligation to administer it ... and promote consistent administration of the law" (Toohey, 29).

On the international front, in May 1984, the government of Canada issued a "White Paper on Copyright," which proposes revision of the 1924 Canadian Copyright Act. Shaopan Tsai (1985) of the National Library of Canada has reviewed these proposals from a librarian's perspective. Not unlike the revised U.S. copyright law, the Canadian proposal for revision deals with the issue of fair use in great detail, particularly in view of the new technologies. With some modifications, however, Tsai concluded that "its proposals seem reasonable if not totally satisfactory to librarians" (Tsai, 269).

Similarly, the need for revision of the British Copyright Act of 1956 was the subject of discussion at an Aslib seminar on "Copyright and Information Repackaging: Old Problems, New Technologies." Denis De
Freitas, chairman of the British Copyright Council, pointed out that "the ambit of control given to copyright owners by the 1956 Act gave the copyright owners . . . adequate control over the forms of use to which their works were then being put to any significant extent by the public. Today the scene is transformed, not so much because there are new technologies in operation but because the technologies of the Fifties have been perfected in various ways so that the dimensions of use of copyrighted works is on a totally different scale today than it was in the middle of the century" (De Freitas, 432). Like both Americans and Canadians, the British have had to review their policy of fair dealing (the term for fair use in the U.K.) in view of the technologies. De Freitas discusses the proposal made to the government by the British Copyright Council in 1977 "advocating a complete overhaul of the law and making over 100 specific recommendations" (De Freitas, 439). Four years later, the government responded "in the shape of a Green Paper in which, on most major issues, its view was that as yet it had no view, and it invited further representation hoping that this would lead to 'a lively public debate'" (De Freitas, 439) which, in his opinion, the government has not pursued. In a paper presented at this same Aslib seminar in London, D.N. Wood noted that "the Green Paper does seem to be urging . . . that the publishing and user communities should get together and work towards developing a system which both will find acceptable" (Wood, 465). Clearly, the U.S., Canada, and the U.K. are grappling with the same issues surrounding fair use and the need for clear interpretation of their respective copyright laws.

**Photocopying and Fair Use**

Section 108 of the U.S. Copyright Revision Act of 1976, which deals with photocopying as fair use, continued to be debated and analyzed by both the library and publishing communities. Juri Stratford (1984) of the Marriott Library, University of Utah, has written a comprehensive legislative history of library photocopying, which explains the need for the guidelines outlined in Section 108. Stratford provided an in-depth analysis of the photocopying exemption as outlined in the revised law, followed by a review of the register's five-year analysis of the impact of the new law and concluded that it is "extremely unfavorable to libraries in its interpretation of Section 108. The library community's ability to effectively influence the five-year process is undermined by its failure to understand the relationship between Sections 107 and 108, why a specific exemption beyond fair use is necessary to library operations, and how this exemption is to be exercised" (Stratford, 99).

To better uphold the photocopying provisions as set forth in Section 108, the Copyright Clearance Center, in cooperation with several major U.S. corporations, established the Annual Authorizations Service late in 1983. Virginia Riordan, editor of *Library High Tech*, outlined the service's work and concluded that it "will revolutionize the relationship between copyright owners and corporate users of copyrighted works . . . by providing copyright-owner authorizations, in the form of licenses, allowing users of copyright material to make lawful copies easily" (Rior-
Following its establishment, the Annual Authorizations Service received great praise, including that of David Ladd, former register of copyrights, who called it "a successful voluntary solution which would further affect other difficult copyright-technological issues such as those now posed by electronic libraries and optical disks" (Riordan, 99).

General Electric received much publicity when it signed a corporate licensing agreement with the Copyright Clearance Center in October 1984, an agreement estimated to cost $100,000 a year ("G.E. Signs").

However, despite the praise for the Annual Authorizations Service, it was not without its problems in implementation. Alvin Abbott, vice-president of Springer-Verlag, notified college and university librarians about the firm's intention to limit reserve reading rooms to six copies of any of its published material, and these copies would only be permitted if a license to reproduce materials from these six copies was obtained ("ALA"). ALA's response was immediate—such action would "threaten to chill the exercise of fair use rights by librarians" ("ALA," 701).

Similarly, Texaco experienced a problem with misinterpretation of the scope of the Copyright Clearance Center when, on May 6, 1985, the American Association of Publishers filed a class action suit in the U.S. District Court of New York against the company on behalf of six publishers, who charged gross photocopying violations despite the fact that the oil company had registered with CCC (Fields 1984). It was made a class action suit so that it would represent over 600 publishers whose works Texaco had copied (Robinson 1985). The suit, which will most likely be settled out of court, will undoubtedly refute the statement that "mere registration with the CCC excuses unlawful acts" (Robinson 1985, 4), according to Jon Baumgarten, former Copyright Office general counsel and copyright attorney with Paskus, Gordon & Mandel, the firm handling the case. Baumgarten handled a similar case, filed against New York University several years ago, in which the university was sued for overstepping the bounds of fair use by gross photocopying violations, a case settled out of court.

The U.K. similarly grappled with the administration of photocopying licenses since the recent creation of its Copyright Licensing Agency. Kenneth Pinnock of John Murray Publishers pointed out that "the vagueness and complexities of the present law present a real threat to the attempt to set up a licensing system" (Pinnock 456). Moreover, he noted that there are administrative matters which are not enumerated in the license itself: "the license provides...that full records must be kept, but does not specify the exact form of the records nor are arrangements for the return of the records specified in the license" (Pinnock, 455). A review of the literature reveals that Pinnock is not the only displeased publisher in the U.K. on the subject of photocopying licenses. Clare Cheney (1984) of the Publishers' Licensing Society summarized the views of the publishers and rights owners in the U.K. in her article entitled "Copyright—the Publishers Answer Back." According to Cheney, Publishers' Licensing Society believes that photocopying is being used as an alternative to purchase and therefore results in lost revenue for publishers. Similarly, David Russell (1984) reported that over two
hundred million photocopies are made in U.K. schools each year. The June 2, 1984, issue of *The Bookseller* announced the intention of the Association for Information Management, a British organization, to fight the introduction of a photocopying licensing system by the Copyright Licensing Agency, as a result of its belief in an alarming amount of lost revenue ("Association").

**FAIR USE AND THE NEW TECHNOLOGIES**

Much thought was given during 1984 and 1985 to the impact of the new technologies on the fair use provision of the Copyright Revision Act of 1976 and how this would affect both the user/librarians and the proprietary community. This issue was undoubtedly brought to the forefront by the Supreme Court's 5 to 4 decision on July 17, 1984—in favor of SONY Corporation—on the legality of home taping for noncommercial use. *Publishers Weekly* noted that this decision "opened up the delicate 'fair use' doctrine of the 1976 Copyright Act to broad interpretation" (Fields 1984, 290), a point of view that seems to be the general sentiment of the proprietary community. On the other hand, Nancy Marshall, chair of the ALA Copyright Subcommittee called the decision "a great victory for fair use . . . a landmark decision in the protection of library and user rights" ("Supreme," 70). Susan Robinson, who covered the case for *Copyright Notices*, observed that "the Court lent its wisdom to the definition of fair use for the first time since the new Copyright law took effect, declaring that of the four factors in Section 111, 'the commercial or non-profit character of an activity' was most crucial to this case . . . the majority acknowledged that copyright had been affected by new technologies but contended that judicial restraint toward expansion without explicit legislative guidance had been a recurring theme in copyright history" (Robinson 1984b, 1). She also noted that Justice Stevens, who wrote the decision, observed that "it may well be that Congress will take a fresh look at this new technology . . . but it is not our job to apply laws that have not yet been written" (Robinson 1984b, 15). Justice Stevens' remark is a telling statement about the pace of the new technologies with respect to the drafting of legislation.

Shortly after the resolution of the case, the U.S. Copyright Office hosted a Congressional Copyright and Technology Symposium in Fort Lauderdale, Florida on February 4-6, 1984 (Copyright). Representative Robert W. Kastenmeir remarked there that "technology is already overtaking the complete revision of the copyright law that we accomplished in 1976" (Robinson 1984c, 1).

Automated databases have also been the subject of controversy on the part of copyright owners and users. The Task Force on Bibliographic Databases met at the January 1984 ALA Midwinter Meeting to discuss the impending copyright registration of the OCLC database ("Database"). "After a great deal of legal analysis and an even greater amount of correspondence, the Copyright Office, in March 1984, registered the 628 copyright compilation claims of OCLC in its bibliographic database which includes a large portion of all library cataloging in the United States" (Robinson 1984a, 1). Prior to the registration, over 120 OCLC
member libraries made their objections known to David Ladd, former register of copyrights. While the members' protestations did not preclude acceptance of the claim by the U.S. Copyright Office, Ladd did suggest that OCLC limit its claim to the online database, omitting other accompanying materials. *American Libraries* reported in its May 1984 issue that "the action means that OCLC, like any copyright registrant, now has a legal basis to initiate litigation against a commercial vendor who infringes on the copyright" ("OCLC," 278). Betty Taylor summed up the views of the conflicting parties: "The copyright issue emphasizes the dichotomy in philosophies between individual librarians and OCLC. Librarians generally agree that the OCLC database should not be misused by others but resist any prohibition upon use of their own data as they choose. . . . OCLC takes the position that copyright is designed to protect the combined, union catalog from dilution. The outcome of such dilution could result in erosion of membership and increased costs for those members staying with the system. Furthermore, the private sector would be profiting from library input and financial payments" (Taylor, 15). As was expected, many of the member libraries followed suit by applying for copyright registration of their own databases. However, RLIN, another major utility, announced that it had no intention of following the course of OCLC in this matter ("Ownership," 46).

In January 1985, the U.S. Copyright Office organized a Database Task Group consisting of literary examiners who had undergone special training by the Office of Technology Assessment in handling problems associated with registration for copyright of databases. Nancy Lawrence, head of the Literary Examining Section, noted that "five years ago we would get a database every blue moon; now we receive between ten and fifteen a month" (Wong 1985c, 5). Numerous problems have been associated with the registration of databases since the U.S. Copyright Office's Examining Division first accepted them for registration in 1981. The *Library of Congress Information Bulletin* noted in its August 26, 1985, issue that "databases, unlike books . . . are constantly changing, posing special problems for copyright deposit and examination. New entries or corrections are constantly added to keep a database up to date and competitive. Also there remains a certain doubt about the copyrightability of additional small increments of information" (Wong 1985b, 237). Another problem of database registration is that of the copyright deposit requirements (submission of a copy of the work). The Copyright Office granted OCLC "special relief" by agreeing to accept a single deposit of the database as it existed when the initial copyright claim was made. In April 1985, the Information Industry Association proposed some solutions to the problem of deposit requirements for copyright registration of databases. They called for "paper copies of only the first and last 25 pages of the databases, or other representative portions of the data records" ("IIA," 1). The American Association of Publishers also offered proposals to handle this problem. "Like IIA, they also suggest that deposits be hard copy extracts of the database" (Wong, 1985a, 10).
Beyond the requirements for copyright registration, databases have posed fair use issues for librarians, not unlike those of photocopies. Sally Drew (1985), director of the Bureau for Interlibrary Loan and Resource Sharing, Wisconsin Department of Public Instruction, reviewed this issue in her article entitled “Online Databases: Some Questions of Ownership.” She noted that “depending on the terms of the agreement or contract between a library and the source of bibliographic records, ownership may be claimed by either party” (Drew, 662). The editors of Technicalities quipped that “if you take those license agreements seriously... you’d have a tendency to lock up every disk and never let it out of your sight” (Cargill 1984a, 1). Susan Lytle and Hal Hall (1985) describe how Texas A & M has dealt with upholding the copyright law in the face of installation of 120 microcomputer units and in view of the fact that “the legal ramifications of copyright and computer software are still in a state of flux, and may not be clearly resolved for some time” (Lytle, 35).

Optical disk technology also offers a challenge to the fair use provision of the 1978 Copyright Act. In his article “Securing the Future of Copyright: A Humanist Endeavor,” David Ladd, former register of copyrights, discusses the Optical Disk Pilot Program at LC and refers to this effort as “a paradigm of contemporary legal and political problems in copyright and a testing ground for determining whether we can effectively prepare for the future on some basis other than sacrifice of authors’ rights” (Ladd 1984, 25). In the spirit of creating a dialogue between the librarians and publishers with respect to optical disk technology, the LC Optical Disk Advisory Committee, established in 1983, has met several times to air mutual concerns. For the pilot program at LC, copyright permissions were sought and granted from more than seventy publishers to scan their journals onto optical digital disks during the course of the pilot. These publishers will be kept informed of how the public responds to the technology.

Clearly, the new technologies offer a challenge to libraries and librarians. This theme emerged in several articles written in 1984 and 1985. There seemed to be general agreement that the shape of libraries will alter drastically in the coming decades and that librarians must be prepared to face this challenge. Cargill and Alley noted that “traditional librarians are still being turned out by many library schools, the card catalog is still with us, and more often than not, the people who are in the forefront of technological expansion are not librarians” (Cargill 1984b, 1). Betty Turock similarly noted that “libraries and librarians have continued in their traditional roles to date without major modifications. In fact, automation has proceeded from a manual viewpoint, i.e., applying computer-based technology to operations without alteration. The online catalog, for example, mimics its predecessor, the card catalog, in most operating situations. If the academic library wants to fully exploit the new technologies, that approach will change” (Turock, 302). Melvin George pointed out that, contrary to general opinion, small libraries will not be excluded from the challenge of the new technologies since they will have “a greater need for access to the world outside their
own collections which an investment in automation often purchases” (George, 295). Clearly, fair use and the new technologies will continue to be a source of controversy between users and proprietors in the coming decades unless clarifying legislation is adopted.

FAIR USE BIBLIOGRAPHY

"Association for Information Management to Fight Photocopying License." 1984. The Bookseller no. 4093:223 (June 2).
Cargill, Jennifer, and Alley, Brian. 1984a. "Circulating Software or Let the End User Beware," Technicalities 4, no. 12:1 (Dec.).
Cargill, Jennifer, and Alley, Brian. 1984b. "Keeping Up With the Technocrats," Technicalities 4, no. 4:1-7 (Apr.).
---. 1984b. "5 to 4: Supreme Court Rules for Videorecorder Manufacturers—Time-Shifting Viewed as 'Fair Use' " Copyright Notices 32:1,15-16 (Jan.).
---. 1984c. "New Technologies in the Information Age: Copyright Office Hosts Congressional Committee at New Technologies Symposium," Copyright Notices 32:1,10 (Feb.).
Urbach, Peter F. 1984. "The View of a For-Profit Scientific Publisher," Library Quarterly 54:30-35 (Jan.).
---. 1985c. "Database Task Group Moves Ahead," Copyright Notices 33, no. 7:5-6 (July).
Technical Services in 1984 and 1985: Resources

Marcia Pankake

More than three hundred books and articles dealing with work in library resources—collection development and management, acquisitions, and related topics—appeared in 1984 and 1985. More than eighty journals carried relevant articles. This review selectively surveys that literature. Works cited here were chosen either because they treat new aspects of resources or old aspects in new ways and because they advance the discussion of topics of particular current interest or, in the case of research studies, invite replication. Many topics are omitted, including collection security, inventory, descriptions of collections in particular libraries, and subjects falling within the purview of other reviews in this issue.

Publishing and the Book Trades

Libraries account for only 5.5% of the sales in America of adult trade books and 13.3% of professional books (Dessauer, ix, xi), even though they spend hundreds of millions of dollars on materials. Many books and articles published in 1984 and 1985 inform librarians about publishing and bookselling.

The University of Denver’s annual publishing institute forms the anthology by Geiser (1985) on publishing as a business, with papers on the editorial process, book production, and marketing useful for librarians new to selection or acquisitions who want to learn about the broad context in which they work. Powell (1985) focuses on the editorial decisions and processes in publishing. Ten essays in an issue of Library Quarterly examine the relationships of publishing and libraries with observations on the interrelated problems that can make libraries and publishers oppose each other while pursuing the same end of making knowledge available (Biggs, 31, 13). Allen, Blum, and Eastman (1984) also provide essays on the roles of authors, agents, and editors and the production, marketing, and promotion of books in American trade publishing during the 1980s.

Electronic publishing drew much attention as a big, new development. Butler defines electronic publishing as "the substitution of elec-
tronically generated material, usually displayed on a cathode ray tube, for material published as print on paper. This definition may include the dissemination of text and graphics over electronic channels (television, radio, cable TV, and telephone wires)” (Butler, 42). Goodrum and Dalrymple (1985) describe the technical possibilities of the electronic book while Brownrigg and Lynch (1985) distinguish between “Newtonian” publishing and “quantum-mechanical” publishing. “Waves are the mechanism of quantum-mechanical publishing. The control of electro-magnetic waves, rather than the computer, made electronic publishing possible. . . . A totally non-Gutenberg work would have to be changing constantly (so that any copy delivered through Newtonian means would be out of date); have ‘real-time’ value; and/or involve ‘real-time’ interaction between multiple participants. Multi-user, computer-mediated games would be examples” (Brownrigg 1985, 203). Raitt (1985) reviews the different kinds of materials published electronically and optically, pointing out some advantages and disadvantages, and Hills (1985) lists electronic sources that have no comparable print equivalents.

Electronic publishing presents a myriad of public policy problems. Questions such as how copyright protection can be attained, how First Amendment rights are protected, and what regulation may be necessary—both for published material and for other transactions and communication functions carried on electronically—are analyzed in Electronic Publishing Plus (Greenberger). Sprehe (1984) argues that government agencies are moving more rapidly toward the electronic collection of data than toward their dissemination. Neavill explores a related point, the issue of information survival when computer-based electronic systems are built on the malleability and “potential transience” of the information flowing through them (Neavill, 77). He wonders who will take on the commitment to retain information, speculating that low-demand, historical, or nonscholarly information may be purged and lost. Barker (1984) speculates that machine-readable information products threaten printed products because publishers have difficulty establishing a stable price structure.

Paperless publishing, with the electronic journal as the medium of communication, may fragment scientific publishing while it speeds the process, and “may pose a clear threat to the coherence, order and bibliographic control of the dissemination of information in science and technology. We cannot be sure that a paperless system will serve science better than the traditional form of scientific publishing” (Campbell, 186). Two applications of computers to scientific publishing present different kinds of advantages: editorial processing centers use centralized, shared computing resources to speed publication of journals regardless of their format, and the electronic information-exchange system is a subsequent stage in which “all facets of journal publishing are on-line and interactive” (Campbell, 185). Hunter reviews the reasons for electronic journal publishing, stating that about fifty percent of the manuscripts prepared by scientific authors are done on word processors or computers (Hunter, 78). Pullinger (1984) gives examples of what the electronic
journal provides for authors and readers, e.g., text-checking programs or means for readers of articles to communicate with each other. Singleton and Pullinger (1984) describe ways of analyzing costs of journals to illustrate the problems of comparing costs of paper and electronic journals. Middleton (1985) surveys electronic databanks in Europe. Brownrigg, Lynch, and Engle (1984) speculate about the impact electronic publishing may have on acquisitions and cataloging, and Aveney (1984) outlines the challenges it presents to libraries in terms of equipment, handling and service, and selection and acquisitions.

The book, however, not only survives but thrives in the electronic age. The Center for the Book is promoting reading and research on the history and value of books and reading (Cole, 1984a, 1984b, and 1985). Librarians are making constructive suggestions about the permanence and quality of the materials from which books are made (Mosher, 1984a).

In specialized kinds of publishing, Dennison studied "alternative" publishing, including "self-publishing, small press and university press publishing, little magazine publishing, publishing through a bookstore, publishing through patrons, readings, samizdat, or any means other than through a general trade publisher," concluding that alternative publishing "is the usual path to prominence for writers whose work does not fit the contemporary commercial mold" (Dennison, 3, 193). Biggs (1985) describes the character and products of sixty-six contemporary small presses. Pascal writes about changes in scholarly publishing, observing that university presses "have in recent years been widening the range of their publishing programs and seeking broader audiences for their publications" (Pascal, 63). Duke (1985) surveys the size and structure of technical and scientific publishing, including database as well as print publishers. The necessity for reprint publishing is reviewed by Kronik (1984), and guidelines for reprinting local history were published by the ALA Reference and Adult Services Division ("Guidelines for Reprinting," 1984).

Hinds (1985) described the United Nations publishing program while Touzot (1984) revealed tendencies in current French publishing that diminish its variety and quality. Hueting (1984) studied book publishing in the German Democratic Republic to explain why it is harder to order books from East Germany than from West Germany. Cabutey-Adodoadj, reviewing book publishing in Ghana, concludes that progress there "leaves much to be desired" (Cabutey-Adodoadj, 130). Gillespie examines Canadian book publishing and government regulation and concludes that the economic and political environment does not facilitate Canadian cultural sovereignty. Seventy-one to seventy-four percent of books sold in Canada are imports, eighty percent of them from the United States (Gillespie, 123). Six countries account for over fifty percent of the world book production (Steele, 362). Regardless of where books are published, librarians want to be able to know about and obtain them, for they have "a concern with all aspects of the book production and supply chain on a global level" (Steele, 359). The recently articulated ideal of the universal availability of publications will help to make published information available globally (Stuart-Stubbbs and Simpson).
American librarians have objected particularly to the increases in prices of British serials and to the considerably higher prices charged to American subscribers. One study found that American libraries paid an average of 66.7% more for British research journals than libraries in the U.K. and an average of 34% more than other overseas libraries (Hamaker and Astle). Dual or tier price discrimination, with prices to American libraries stated in dollars rather than pounds sterling, increased markedly between 1974 and 1984 (Joyce and Merz). This is not the first time American libraries have been the object of disadvantageous prices; in the 1930s German publishers demanded "higher payments from subscribers in America" (Ruschin, 15).

**COLLECTION DEVELOPMENT**

Overviews of the functions of collection development and management illustrate the range of activities and new emphases in work toward developing library resources (Magrill and Hickey; Pankake, 1984; and Lynden, 1984a and 1985). One selective bibliography of recent publications on "collection planning, implementation, and evaluation" concludes that the literature is pertinent to the needs of the college librarian (Moskowitz, 5).

**POLICY STATEMENTS**

Evans (1985) discusses the process of preparing written collection development policy statements as he reviews the use of committee preparation and of the 1978 *Guidelines for Collection Development*. Donahue and her coauthors (1984) describe a process for involving teaching faculty at Texas A&M University.

Numerous library policies saw publication, including those of Brown University (1984); the Illinois State Library ("Collection Development Policy . . ."); and full or partial texts of policies from eighty-seven libraries in the revised edition of Futas' anthology. Noting changes in the seven years between the first and second editions, Futas sees that fewer libraries have policies written by individuals and more by committees: "Everyone who possibly can gets involved in the act" (Futas, vi). She mentions that policies refer to "collection development" instead of to "materials selection" and specify more attention to collection maintenance. The greatest difference is that instead of policies with a separate section on selection, the treatment of selection is diffused throughout the policy because "selection has become such an integral part of the whole process that it cannot be separated from all the other parts of development of the collection" (Futas, xii).

Other related professions are adopting what librarians have learned about policy statements; Grigg (1985) writes of policies in archives, applying concepts of collection development to the holdings of archival repositories, and Phillips (1984) adapts portions of the ALA *Guidelines* to handle specific problems of manuscript collections.

Root (1985) advocates widening the collection development statement to make it a collection management policy, incorporating policies on retention, preservation, housing, and weeding.
BUDGETING

The materials budget should work as both a planning and operating tool whether a library uses zero-based budgeting, a planning-programming budget system, formula-based budget, or "modified quantitative data" method (Reed-Scott, 1985b). Whatever the method of budgeting, the library should keep the higher levels of the institution's administration well informed during the course of the year so that they have no surprises when the library forwards its budget request (Williams). Williams provides a list of sources for annual price data, and Dennis Smith (1984) describes the method used successfully by the University of California to plan a budget calculated with inflationary price increases.

The computerized circulation system at the University of Constance in West Germany allowed librarians to make a budget formula based on the numbers of book circulations (distinguishing first-time circulation from subsequent circulations) added to average costs for materials per volume and the relative numbers of purchases in each subject (Schmitz-Veltin). Using circulation as a measure of need, they felt this formula provided a way to meet the demands on the collection and relieve the internal competition for funds. This case illustrates that formulas are used more for their political acceptance than for their theoretical soundness. Most published book-allocation formulas use mathematical conventions deceptively: neither empirically nor scientifically sound, they are instead "notationally simplified expressions of arbitrary procedures" (Shirk, 37).

Large increases to the book budget may result in an increase to the hidden costs of acquisitions and cataloging; Leonhardt proposes that libraries figure a 10-15% operating margin; if the acquisitions budget increases by $100,000, $10,000-$15,000 may be necessary to "pay for the additional supplies and processing costs" (Leonhardt, 49).

SELECTION

Because continuity in building the collection is desirable and because it is the library that is administratively accountable for the collection, "the selection process must be seen as the responsibility of the library faculty, aided and assisted by the teaching faculty, not the other way around" (Gardner, 144-45). In places where the teaching faculty perform selection, the library staff should take the initiative for training them systematically in the tools and methods. "By initiating a procedure that specifies the parameters of faculty responsibility for book selection, the library takes a long stride toward establishing the principle that it will exercise ultimate control over its collections" (Sandler, 71). In studying whether books selected for a college library by the teaching faculty circulate more than books selected by the librarians, Millson-Martula found that "both groups of selectors may be equally effective" (Millson-Martula, 507).

Three models of organizing responsibility for selection are (a) the "acquisitions model," in which the library has blanket orders and approval plans and buys what the faculty select; (b) the "bibliographer model,"
in which librarians have responsibility for disciplines or groups of subjects; and (c) the "selector model," which divides collection development among staff who bear other responsibilities (Atkinson as reported by Propas, 58). The bibliographer model has been traced to a German antecedent in the early nineteenth century: "The individuals known collectively as Referenien were and are members of the library staff with high academic qualifications in whose hands book selection in specific fields is placed" (Haskell, 74). In the 1940s and 1950s American and English libraries began to employ subject specialists and by the 1960s, "the notion and use of subject bibliographers was firmly entrenched" (Haskell, 76). One advantage of this system is that the bibliographer "will come to understand how scholars in any given field communicate their research and further, how their research is synthesized in reference sources or identified in bibliographic aids," asserts D’Aniello, as he lays out a description of responsibilities and educative sources (D’Aniello, 12).


In addition to those in McClung, other articles offer help on the selection, acquisitions, and handling of materials in particular subjects and formats. Collection development for art materials in microform is discussed comprehensively by Chiarmonte (1984), and art-exhibit catalogues are reviewed practically by Houghton (1984). A glossary for music and sound recordings is provided by Thorin and Vidali (1984). Ensor describes building a collection in computing, and Hoffmann treats popular culture. D. N. Wood surveys "grey literature," the "material not available through normal bookselling channels" such as semipublished reports, conference proceedings, reprints, and official publications, asserting these are "a costly public asset going largely to waste" (Wood, 278). Offering estimates of numbers of materials and agencies producing grey literature, Wood provides recommendations for the producers and for librarians. Posnett (1984) believes that publishers have done less than librarians to make such literature available.

Some grey literature emanates from governments; Rozkuszka makes distinctions in the "shadow literature," defining government documents and government publications, recommending that the term "publications be used for those items which are produced either for sale or for free distribution, with the implied or voiced intent of informing the
general public," distinguishing them from documents which "are produced for the day-to-day operation of government, are not 'published,' and do not have the intention of public informing" (Rozkuszka, 3). Rozkuszka believes that "documents do not have as their principal function the transmitting of information from government to the governed. This is the function of official publications" (Rozkuszka, 3). Zink argues that "drawing government documents more into the mainstream of the library's collections would help to achieve the avowed goal of documents librarians to make government information more widely available" and suggests "that most government publications department librarians are still vastly overcollecting and seeking to be complete" (Zink, 4).


Finally, the useful and long-awaited ALA primer on microforms covers use of the medium, technical descriptions, evaluations of microforms and their place in collection management (Spreitzer). Sullivan reviews the history and progress in developments in microform publishing, illustrating that librarians, through their professional organizations, made an impact on the industry (Sullivan, 169).

A handful of varied articles provides information about the selection and acquisition of materials from other countries. Karkhanis (1984) thoroughly reviews the problems, professional literature, selection tools, and suppliers for materials from eight South Asian countries. Downey (1985) discusses problems and techniques in identifying and obtaining English-language materials from twenty countries and territories of the Caribbean. The problems of publishing and bibliographic control coupled with a rudimentary distribution system lead Wolcke-Renk to conclude that the best acquisitions method for African imprints is to "go there and collect the merchandise—pay cash—bring it back with you" (Wolcke-Renk, 380). "From our point of view there was and is only one solution to the problem of assuring the continuous supply of books from Africa, whilst at the same time guaranteeing immediate payment to the African bookdealers and publishers: self-collection and cash payment" (Wolcke-Renk, 382).

Characteristics of the developing book trade in Nigeria, such as too few authors, authors publishing outside of their home countries, censorship, book piracy, scarcity of paper and other materials, and an unorganized distribution system, are outlined by Nwafor (1984). Lungu adds to these local conditions other reasons to explain why Zambian libraries, like many libraries, have difficulty acquiring African serials. "The acquisition of serials in developing countries is a very complex and problematic undertaking. The problems emerge right from the underdeveloped situation of the countries themselves" (Lungu, 202). Lungu asserts that developing countries depend too much on foreign publishers and that 90% of the periodicals received in Third World libraries are of foreign origin (Lungu, 192). Nzotta (1985) agrees that publishing and libraries have a lower priority in developing countries from his study of collections and holdings of Nigerian public libraries. Observing bud-
gets, numbers of volumes and staff, and selection sources and procedures, Nzotta believes that the libraries he studied are inadequately funded for collections but that their acquisitions departments are overstuffed.

**ACQUISITIONS**

"The Business of Acquisitions" was treated comprehensively at a preconference in July 1985 ("Business of"). Reid provides an overview of acquisitions, "all tasks related to obtaining all library materials" (Reid, 1984, 89), outlining the functions, working organizational relationships, use of vendors, records and files, ordering procedures, other methods of procurement, special problems, and keeping up with new trends. Magrill and Hickey (1984) also cover the range of acquisitions work. Reid supplies additional practical guidance on gifts and exchange operations (1985a) and on searching and verifying (1985b), proposing the latter operations as a subject for research because she has found "a surprising range of expectations for quantitative output per acquisitions searcher—a range of 'from 3 to 5 per hour' to '25 or 30' per hour" (Reid 1985b, 54). Payne describes how the Tax Reform Act of 1984 can affect gifts operations (1985a, 1985b).

Vendors spoke to librarians about their side of acquisitions ("Panel Presentation"); one opposes the conventional view and argues that the small college library has much to gain from an approval plan (Kevil). Selecting approval-plan vendors was studied by Reidelbach and Shirk (1984 and 1985), who publish comparative data on eight American companies.

Bracken and Calhoun (1984) propose that acquisitions librarians evaluate vendors by their stock and service in specific subjects and publishers. Thornton and Bigger’s British study compares vendors in electronics, computing, and scientific journals, comparing prices and services. They found "a great difference between agents, and the size of these differences justifies further investigation" (Thornton and Bigger, 439). Baumann’s (1984) comparison of vendors also revealed differences in the four factors of discount, speed, fulfillment, and service. Studies to evaluate the performance of book vendors will be facilitated by the "Guidelines for Evaluating Performance of Vendors For In-Print Monographs" (1985), prepared by a subcommittee of the ALA Resources Section’s Collection Management and Development Committee.

Tuttle writes a full state-of-the-art survey of what jobbers in serials can do for libraries, observing that the work of subscription agents has evolved from receiving orders and sending journals and invoices to solving problems between libraries and publishers, supplying data, and providing online services like binding checks. Tuttle (1985a) views this evolution of services as positive evidence that vendors will survive. Tuttle (1985b) also explains how magazine fulfillment centers operate.

Enough libraries have installed automated acquisitions systems that librarians have been able to reflect upon the planning and preparation for automation. Bryant describes the planning process used at SUNY-Albany, supplying observations such as "Members [of the planning
group] need to know why they were selected and what functions they will be expected to perform, and appending a list of "Questions to Ask Users and Vendors" (Bryant, 286, 296–98). Baldwin considers the political context of the decision-making process, assessing how cost data are presented. "Another way of justifying installation is cost/benefit analysis, but this type of analysis is largely a sleight-of-hand trick to get capital money out of funding authorities. Cost-benefit arguments usually have a fanciful fairy-tale-like quality. Benefits are calculated in dollars; but they seldom represent real expenditures which are saved" (Baldwin, 31). A comprehensive guide for libraries moving to an automated system offers checklists for evaluating systems (Acquisitions).

The implementation of the Innovacq system at Illinois State University and the use of Gaylord acquisitions system GS-500 at the University of Louisville are described by Delong (1985) and Bullard (1984) respectively. The OCLC acquisitions subsystems at Texas A&M University and at City College (CCNY) are described by Hepfer (1984) and Ra (1985) respectively.

**COLLECTION MANAGEMENT**

Many publications on the tools and techniques of collection management, along with studies illustrating the application of those tools and techniques, suggest that collection management has moved to the forefront. Because many of the varieties of work in collection management require statistical calculations, Hacken's "warning flag against the sloppy and unconsidered assumptions that lead to faulty conclusions" waves briskly (Hacken, 18). In a cautionary and humorously conveyed argument, Hacken recommends the use of careful techniques in sampling, and in using percentages, definitions, and averages, and reminds us of how easily one can reach false conclusions such as the calculation that the average American annually spends ten hours in prison. "Faulty conclusions, grown on the vines of sloppy assumptions, can lead to bitter fruits" (Hacken, 30). Quantitative and qualitative analyses need not oppose each other for each adds a distinctive dimension: "an adversary relationship does not need to exist between numeric values and collection values" (Hacken, 20).

**COLLECTION ASSESSMENT**

The terms "collection assessment" and "collection evaluation" sometimes seem to be used interchangeably, but in this review "collection assessment" refers to examining and describing library holdings or collections. The term "evaluation" is reserved for examinations of the collection which conclude in a statement of value or utility to characterize the collection.

In the measurement and description of collections the National Shelflist Count is often used as a comparison. Ortopan (1985) describes its origins as a method for measuring the size and distribution of books held by research libraries. Shelflist cards are measured in 490 LC subject breakdowns, and a formula converts centimeters to numbers of titles, although current machine-readable catalog files offer the possibility of actual title counts (Branin, Farrell, and Tiblin). This measurement of-
fers one objective standard for comparing collection sizes and growth rates.

Preibish surveyed and compared Canadian library holdings in serials as he wondered how many of the published serials Canada should hold. In two successive surveys Preibish (1984, 1985) found negligible growth in university libraries and greater growth in the two national libraries whose collections have become de facto the national serials resource. One model collection assessment is described by Shiel and Alt (1985), who examined holdings in several ways—comparing their collection to that in other universities and checking holdings of specific titles to conclude that they had 20–25% of the titles in the history of Christianity.

Another tool of the collection assessor is the RLG Conspectus, a standardized list of LC subject headings with standardized codes to describe collections, intended to “assist in cooperative efforts in collection development, cataloging, and preservation” (Sitts, 96). This method of analyzing collections is spreading; it has been adapted to a group of libraries in Indiana and will be used by ARL libraries across the country and by Canadian research libraries (“North American”; “Phase II”). Nisonger (1985) explores advantages and disadvantages of the Conspectus and raises questions about its application in medium-sized libraries as a result of his analysis of the subject groupings applied in a consortium of Texas libraries.

**Verification and Overlap Studies**

Verification studies began as RLG members sought to test empirically the uniformity and validity of the holdings and codes stated in the Conspectus (Larson). Conducted by a group of libraries checking their holdings of specific titles in a discipline, verification studies are “comparative collection analyses” which “allow comparative study of the strength of holdings of each member library in specific fields, or certain lines of the Conspectus. They permit comparison of collection strengths and distribution of titles among reporting libraries” (Mosher, 1985, 336). One must define a universe of titles within the scope of the study and then get a sample of that universe, a sample chosen carefully enough to allow the differences between libraries to show (Coleman). Each library also learns about the nature of its own collection. The holdings of four Indiana libraries and some RLG libraries of Biblical studies were examined by this method (Gleason and Deffenbaugh); the researchers concluded that “by analyzing all relevant characteristics of this universe—form of publication, age, language, subject—and measuring our holdings against each, we can not only judge the effect of past policy but can also chart our future course with considerable preciseness” (Gleason and Deffenbaugh, 111).

Overlap studies, testing the holdings of the same title(s) among libraries, reveal new characteristics in the natures and sizes of collections. Doll’s study of children’s books in public and school libraries found that “the relationship between collection size and overlap is linear and positively related” for “as collection size increases, overlap increases” (Doll, 283). Shaw identifies four predictors of overlap in her study of public and academic libraries: type of library, size of collection, publica-
tion date, and subject of book. Deducing that overlap is a "complex, multi-dimensional phenomenon," she found a "highly positive skewed distribution when the number of books is plotted against the number of libraries owning the book," and that "most books are owned by relatively few libraries" (Shaw, 275).

**Collection Evaluation**

Collection evaluation, "one of the most potent and promising tools of the collection manager," gives "an assessment of the utility and appropriateness of a library's collections to its users or programs" (Mosher, 1984b, 234, 211). The principal methods of collection evaluation include using standards, checklists, verification studies, citation analyses, use studies, and size and growth factors (Wiemers). Measurement techniques may be grouped into collection-centered and client-centered methods (Hall, 1984, 1985). "Planning may be the single most important element in successful collection evaluations [for] there is a direct cause-and-effect relationship between posing good questions and receiving good and appropriate answers" (Faigel, 33).

**Studies of Users and Use**

User studies formerly were surveys of patrons on a large scale; newer methods with statistically valid samples now allow shorter and more focused studies (User Studies). Investigating what library users understand by the words "use" and "read," an Australian librarian found that library use was not synonymous with the use of library materials (Yerbury); that students did link "use" to "useful," and that if they found what they looked for, they felt they had used the library. A review of the literature on public library users revealed that older adults as a group do not read books or visit the public library as often as younger adults, and age alone does not explain this (Kamin). Library use comes from a small percentage of the population of potential users. Wall provides an extrapolation of frequency distributions of recorded use "to illustrate patterns of uptake by potential users" (Wall, 12).

A study of circulation records and users of government documents showed that publications of government agencies circulated in "rough proportion to their numbers in the collection," that cataloging facilitated use by undergraduates, and that the use of documents was "not dramatically different from the level of use for other research materials" (Watson and Heim, 269).

A comparison of the circulation of popular and technical books in a medical library showed that popular books were a worthwhile purchase even on a small budget (Morton). A study of periodicals use led one library to conclude that nonreceipt of issues was a major problem, to change the physical arrangement of the collection, and to cancel little-used titles with a history of nonreceipt problems (Konopasek and O'Brien). The study of periodicals use in a Swedish technical university library illuminated and confirmed findings of other use studies; librarians found that five percent of the titles met fifty-four percent of the demand (Fjällbrant). Book lists increased the circulation of fiction in an academic library (R. Wood, 1985), and a study of circulation statistics
led to changing the nature and means of acquisitions for another academic recreational reading collection (Christensen). A study of interlibrary loan requests for books at a university library showed, with implications for the book selection policy and practices, that most were recent inexpensive items in print within the immediate subject interest of the requestor (Roberts and Cameron).

Too few of the large generalizations about use of libraries are substantiated, but a review of the literature and a study of library card holders and book circulation in twenty cities led James to conclude: “Library use in the 1930s and library use in the 1970s occurred in very different social environments. It may be that, while the economic conditions of the two eras were similar, the social conditions that produced the high library use of the 1930s were no longer influential during the decades of the 1960s and 1970s. This suggests the need for further research to learn more about the individual and cumulative effects of environmental variables on public library use” (James, 270).

Broadus offers a digest of some of what we have learned from use studies, concluding, “In general, as we learn more about the costs and validity of various kinds of use studies, we shall be able to apply them more intelligently and more widely, building up a body of information that will be of great practical use” (1985a, 60).

COLLECTION MAINTENANCE

Librarians who work with their collections to know, describe, evaluate, and manage them benefit greatly from studies that illuminate the nature and uses of books and periodicals. Osburn (1984) examines the development of the scholarly journal and its function and character as a communication medium in science and scholarship. Stankus continues his work in serials as he studies the scholarly publication patterns of biomedical scientists and the related subsequent demand for new journals in the library. He finds that mature scientists who publish frequently do so in new journals in their specialties, but they also remain loyal to both specialty journals and major general multispecialty journals. They lose interest in journals “of an intermediary level of specialization,” and these journals may be candidates for cancellation in the library, to help offset the costs of subscriptions to new titles (Stankus, 103). “Bibliometric laws” can aid librarians in collection management; Bensman surveys and explains Lotka’s law of author productivity, Bradford’s law of scattering, Garfield’s law of concentration, the Matthew effect, and de Solla Price’s cumulative advantage distribution, using these to suggest that libraries “focus on a relatively small, multidisciplinary core of heavily used titles that rank high in the information and social system of scholarship” (Bensman, 24).

Research library collections continue to grow; they once were thought to double about every seventeen years, but recent work suggests they have been growing more slowly (Seibert). Constant growth offers only one impetus for monitoring collections. The report of the Yale collection preservation survey provided a profile and planning tool showing that an overall 37.1% of Yale’s collections is on brittle paper and 82.6% on acidic paper (Walker, 126). In addition to planning for preservation and
conservation, librarians must plan weeding programs, analyzing needs, options, and feasibilities (Reed-Scott, 1985a). One library found it cost $14.22 in professional staff time and $18.62 in support staff time to discard a volume (Signori). Policies, procedures, and criteria are suggested not only for weeding but also for transferring works out of a general circulating collection (Streit, 1985a, 1985b). One study suggests that libraries with over 1.5 million volumes should shelve 33-50% of the collection in a storage arrangement, either compactly in-house or separately elsewhere (Boll). Small collections, especially reference collections, can be reviewed title-by-title to make decisions about inventory, transfer, weeding, and cancellation, and such a review results both in better knowledge of the collection and a stronger collection (Adalian and Rockman). Whether candidates for cancellations in serials collections can be identified by using journal citation counts is the subject of disagreement, with Broadus (1985b) and Line (1985) differing. Librarians should keep in mind that ranking journals either by citation analysis or by “reputational approach” is not the same as ranking the articles published, for there may be a “greater variation in the quality of articles published within than between journals” (Weisheit and Regoli, 323). When libraries do cancel serials, a two-step communications procedure through online bibliographic files can facilitate cooperation within a network or region (Carter and Bruntjen).

**COOPERATION AND RESOURCE SHARING**

“With the growth of online databases and their increased use by scholars in all fields, we find users requesting more esoteric, lesser-user items than ten years ago. They seem to be less selective in what they want to read. Unfortunately, online bibliographic database searching has resulted in users requesting many lower-quality publications that the library does not have. For example, the ERIC database . . . indexes a number of local and regional periodicals that are of low quality” (Shapiro, 52). This expanded demand for lesser-held sources provides an impetus for resource sharing and for coordinated collection development. When does an academic library need a formal resource-sharing agreement? Interlibrary borrowing may show the degree to which the library’s collection does not support local needs, and Feller (1984) correlated circulation, current acquisitions, and interlibrary loan in attempting to answer that question.

Until recently cooperation among libraries has had a relatively limited impact on their collection development programs. With shared purchases, with the allocation, noncompetitively, of primary collecting responsibilities, and by other techniques, libraries are shaping their collections in consort with each other (Cooperative Collection . . .). Pond and Burlingame (1984) describe the process of setting up formal cooperation in serials between two libraries in Ohio which used a philosopher to facilitate the work. Steps and pitfalls in planning coordinated collection development can be anticipated (Pankake, 1985). A half-dozen reports on how cooperation works in several states and regions enrich the theoretical literature. Rutstein (1985) reviews a decade of resource-sharing activities in Colorado, and Shubert describes three cooperative pro-
grams in New York. Martha Smith (1985) specifies five prerequisites to the formal agreements librarians in North Carolina made to select rare books. Sloan (1984) observes patterns of interlibrary loan transactions in Illinois and points out the importance of small libraries, for the six smallest libraries lent more than they borrowed. In the states of the Pacific Northwest a new program has been established to stimulate coordinated collection development ("Fred Meyer . . ."). Coordinating holdings involves more than purchasing, housing, and loaning titles; members individually hold a significant number of titles held also at CRL, with over 35% of the current English-language serials at twenty-one or more other libraries. They should consider the next stage of a cooperative policy of cancelling duplicate holdings (Thomas, 1985).

OTHER TOPICS

Standards are proposed or completed for permanent acid-free paper ("National Standard . . ."); order forms (McCallum, 1985); serial article identifiers (McCallum, 1984); price indexes (Lynden, 1984b); and small-format disks ("Library Is . . ."). The development of optical disks and other media for storing information proceeds (Fleischhauer, "Optical Disk . . ."; "Analog Video . . ."; and Videodisc). Librarians experiment with the microcomputer in collection development (Welsch, Crossfield, and Frazier). While all these changes are underway, librarians are advised to reconsider their whole notion of collections and resources, acknowledging themselves as "part of the information industry," and to take a broader view of the costs of housing, processing, and providing information (Martin, 5). Such a broader view could encompass database searching, electronic reference, and on-demand purchase of materials to give away. This broad view illustrates that work in library resources grows more varied, complex, and sophisticated year by year. Librarians must face the challenges presented by new technologies and paperless communication, the findings of use studies and their implications for our collections ideals, and the uncertain goals of current arrangements for cooperative collection development in order to realize Bennett's forecast that our "golden age is still before us" (Bennett, 257).

REFERENCES


Donahue, Mary Kay; Brown, Deborah; and Gyeszly, Suzanne. 1984. "Collection Development Policy Making: Research, Design, and Implementation at Texas A&M University," Collection Building 6, no. 3: 18-21 (Fall).


Line, Maurice B. 1985. "Use of Citation Data for Periodicals Control in Libraries: A Response to Broadsus," *C&RL* 46:36-37 (Jan.).


Technical Services in 1984 and 1985: Serials

Germaine C. Linkins

A review of the literature on serials and serials librarianship for 1984 and 1985 shows a myriad of activities in a very wide arena. Yet the automation gains in recent years have produced an interdependence among serialists that both shrinks our world and, at the same time, opens up new avenues of knowledge and cooperation undreamed of twenty-five years ago. Sharing has become the byword that links the disparate activities of the serialist’s world. As we look at the various facets that make up the last two years of serials work, it is easy to see the interrelationships that have promoted change.

AUTOMATION

The automation of serials has taken quantum leaps forward in the last two years. Designers of integrated online systems have considered serials control one of the major components for development within their online public access catalogs. At a seminar given by RMG Consultants in Washington, D.C. in January 1985, results of its unpublished study done in 1983 for the California State University System were presented. Only three of the twenty-two major vendors included in the study offered serials control as a part of their systems at that time. By the end of 1984, the number was expected to reach eleven, and fifteen vendors had promised availability of serials control subsystems by the end of 1985. It is clear from the literature and from vendor presentations at ALA meetings that not all of the fifteen subsystems had materialized by then.

Some of the designers are forging ahead to complete their systems as promised. Others are reassessing the field and looking to established systems for possible interface. Faxon Company, for example, has already announced that it is testing interfaces with Carlyle, Geac, and LS 2000 (FC 1985; Sell). Still others are looking at a whole new market dictated both by the rapidly expanding field of microcomputers and by the fact that mainframe and even minicomputer automation is overkill for many libraries. Consequently, microcomputer-based systems are springing up and being embraced enthusiastically by the library world. OCLC announced in January 1985 that it would pull the plug on its serials control system, which was never very successful, in favor of a stand-alone micro-based system called SC 350 (Strozik, 2). The demise of OCLC’s serials

Germaine C. Linkins is Director of Libraries, Frederick W. Crumb Memorial Library, State University of New York College of Arts and Science, Potsdam, New York.
control subsystem is scheduled for summer 1987. Along with ACQ 350, OCLC's new micro-based acquisitions system, SC 350 will interface with the network's online catalog LS 2000.

In addition to its IBM mainframe system, Faxon has also moved to a stand-alone micro system called MicroLinx. The advantage MicroLinx offers over other micro-based systems is access to the entire Linx network through built-in access to the INFOSERV databases for acquisitions and collection development plus optional access to the main DataLinx files at a reduced cost (FC 1986). Blackwell North America's Perline/Bookline has released its version 4, which is micro-based and can be purchased jointly (Perline/Bookline) or as individual modules ("Blackwell Version").

There are several other micro-based systems on the market, addressing a variety of library needs in relation to serials control. Of these, the two receiving the most attention in library literature are Innovative Interfaces' INNOVACQ, which is a package turnkey system using its own proprietary equipment and operating system, and CLASS' CHECKMATE, which runs on Radio Shack equipment and utilizes either the MS-DOS or TRS-DOS operating system. Another system which compares very favorably with the better-known systems is MetaMicro of San Antonio, Texas. It has many of the capabilities of larger systems in terms of storage capacity, ability to manipulate data, and adherence to national standards. Yet its price is not at all out of line with other comparable micro systems (Leatherbury, 21).

LC has chosen to develop its own in-house system for serials control. This decision was made after a six-month pilot project using both the University of California at Los Angeles and the Faxon check-in systems. Prior to beginning development, LC's check-in file is being converted to machine-readable form (Bloss and Kovacic).

One cannot discuss the automation of serials without discussing standards. As serials automation proliferates, the need grows for standards that insure consistency. In the last two years major contributions were made to the standardization of serials in areas relating to processing, description, and identification.

In 1984 the American National Standards Committee Z39 was renamed the National Information Standards Organization (NISO)Z39. The committee's standard for serials holdings statements at the detailed level reached the ballot stage but was not approved (McCallum, 63-64). Approval was still pending at the end of 1985.

While NISO was unable to finalize Z39.44, the new MARC communications format for holdings, which was developed jointly by LC and the Southeastern Association of Research Libraries [SEARL] Cooperative Serials Project, was approved with relative ease by MARBI. Though the NISO standard for serials has yet to be approved, it was used to define the MARC format, thus giving the standard at least informal acceptance (McCallum, 67). Data elements were expanded to allow the format to be used for a variety of functions such as serials control and union listing. The format has been programmed and tested by SO-LINET and is now being used for inputting holdings to the LAMBDA
database for the SEARL Cooperative Serials Project. The Virginia Tech Library System [VTLS] has incorporated the format in its serials control subsystem, and Harvard University has also programmed the format for internal use (Flecker, Powley, Rittick).

The goal of the Serials Industry Systems Advisory Committee [SISAC], which is an arm of the Book Industry Study Group, Inc., is to "develop and promote a standardized, automated and transmissible system to facilitate the identification and processing of information concerning serial publications" (SISAC, 156). The committee has identified three areas of concern, on which it is focusing its efforts: (1) standardization of formats to permit computer-to-computer ordering of serials, (2) automation of library check-in, circulation, and control through standardized, machine-readable coding to identify specific issues of serials, and (3) standardization of machine-readable coding of articles to facilitate the payment of royalties for copyright and identification and retrieval of articles in full-text and bibliographic databases (SISAC, 157). SISAC, along with the Book Industry Systems Advisory Committee, has been working to develop voluntary standards which must be coordinated through NISO and is currently developing a bar code which incorporates ISSN, issue, and article-specific information (Saxe).

SERIALS COSTS

After several years of double-digit inflation in journal publishing, price increases are beginning to slow down. The average price of a journal subscription in 1984 was $54.97, an increase of 9.4% over the previous year (Brown and Phillips, 1422). The average cost in 1985 was $59.70, or just 8.6% higher than in 1984 (Horn and Lenzini, 55). While this is certainly heartening, it should be noted that these increases are more than double the national inflation rates for the same years. Moreover, the increase is an average. There are still categories of materials increasing at much higher rates as social sciences begin to outstrip science and technology. In 1984 psychology journals had increased some 17.6% over the previous year and an additional 9.5% in 1985. The sharpest increase in 1985 was among journalism and communication journals, which rose 17.4% over the previous year.

Not all journals increased their subscription rates and, in fact, some prices actually declined. General-interest periodicals increased a modest 5.6% from 1983 to 1984 but dropped in price by 5.3% from 1984 to 1985. While many prices remained static, the number of journals charging institutional rates (which are often double the personal rates) increased (Brown and Phillips, 1422).

A new phenomenon in journal pricing which is impacting American libraries is the move by a group of British publishers to institute a three-tiered pricing structure: personal, institutional and North American. The "rationale" is said to be the weakness of the British pound sterling in the international marketplace. American libraries have protested this type of discriminatory pricing, particularly in light of the fact that Canadian libraries are sometimes exempted from the North American price. To date there has been very little action on the part of publishers. One
Serials 1241

The publisher, Taylor and Francis, has announced a two-year moratorium on price increases for North American subscribers. The firm's solution was to eliminate the differential pricing, not by instituting a price rollback but by increasing rates to its British and European customers (Dougherty).

Differential pricing in whatever form has a kind of stranglehold on libraries. Because of the needs of their constituencies, libraries simply can't cancel subscriptions when prices go up. They can, however, initiate use studies which provide documentation on the value of particular journals to their user communities. And libraries can let it be known that meeting the need of their readers also means getting the best buy for their limited dollars (Dougherty).

A discussion of serials costs for 1984 and 1985 is not complete without looking at a major change in the preparation of the price indexes which help to guide libraries in the allocation of their serials budgets. From 1961 to 1971 the price indexes were prepared by Helen Welch Tuttle of Princeton University. Then Norman Brown of the University of Illinois prepared them, with the assistance of Jane Phillips from 1975 to 1984. In 1985, with the twenty-fifth annual survey, the responsibility for the compilation and maintenance of the indexes transferred to the Faxon Company. The transfer received both the approval and cooperation of the Library Materials Price Index Committee of the Resources Section of RTSD, which sponsors the index (Horn and Lenzini, 53).

While the purpose, analysis, and scope of the index remain unchanged, the compilation is somewhat different. Faxon's online price file is used to obtain current prices. Prices for titles not listed are obtained by telephone contact with publishers. A number of titles have been deleted due to lack of current activity as shown in the Faxon title file. Titles added are those with the largest number of subscriptions. While this method does not comply completely with the requirements of ANSI Z39.20-1983, it was approved as a reasonable substitute by the Library Materials Price Index Committee (Horn and Lenzini, 54).

The 1985 index does not include the U.S. Serials Service index, which was suspended by the Library Materials Price Index Committee pending evaluation of its scope and usefulness. If the index is reinstated, it too will be prepared by Faxon (Horn and Lenzini, 53).

**ELECTRONIC PUBLISHING AND DOCUMENT DELIVERY**

The phrase *electronic publishing* refers to two very different methods of publication. The first is the utilization of computers to facilitate the production of conventional publications. Several major publishers of scientific journals, such as the American Chemical Society and the American Institute of Aeronautics and Astronautics, have successfully adopted computerized photocomposition for journal preparation (Lambert, 79). The other method is to distribute data electronically via telecommunications networks. This method allows for paperless versions of present publications or for totally electronic "publications" which are written, edited, communicated, and received online (Lambert, 79).

Electronic versions of paper publications have met with some success,
particularly in the scientific and business communities. They tend, however, to be expensive, and subscribers must have compatible equipment to access them. They are perhaps most successful through electronic document delivery systems such as BRS and DIALOG. The latter recently announced access to full text of thirteen McGraw-Hill publications, including Business Week, Byte, Engineering News-Record, Nuclear Fuel, Nucleonics Week ("DIALOG," 74).

The truly electronic journal is still in the experimental stage. It has several advantages such as the reduction of time between submission of a paper and its "publication," the only time lag being for editing and referencing. There is no necessity for a fixed publication schedule or a fixed length. Readers could link comments with the paper itself, thus providing a type of information exchange (Lambert, 93-94).

There are, of course, a number of severe drawbacks. The most obvious one is that without a computer and a communications link one cannot gain access to the journal. Portability of the journal is restricted, despite the availability of portable computers. Access to a variety of papers at the same time is not possible in an electronic system. Further, a code of practice on availability of back files has yet to be developed (Lambert, 96).

Electronic journals are intriguing but have yet to establish reputations in their fields. Until they do, authors will be reluctant to submit papers for publication. One of a scientist's main considerations in selecting a journal for publication is the prestige in which the journal is held in the author's research field.

A final problem impeding the development of electronic journals is the lack of compatibility among equipment from different manufacturers. This situation appears to be changing. Note, for example, the number of microcomputers that are now being advertised as "IBM-compatible." Still, standards need to be established which will ensure compatibility between authors' output and publishers' equipment (Lambert, 97).

Electronic document delivery has developed more rapidly than the electronic journal. Electronic ordering through vendors or network systems has facilitated both the purchase of materials and interlibrary lending, at least at one end of the operation. Online serials services provide bibliographic citations as well as full-text journal access through controlled vocabulary searching. With the use of printers connected to computer search equipment, information can be retrieved almost immediately and without dependence on a cumbersome and archaic mail system.

Chemical Abstracts will, for a fee, lend most of what appears in its recent databases. While this service is expensive (Rollins, 191), it serves as a valuable source for materials not easily found elsewhere. Chemical Abstracts apparently believes it has a responsibility to make available most of what appears in its files. Other database vendors might well take a lesson from this vendor on responsibility to the research community that provides their bread and butter.

Electronic delivery of documents has not proceeded as rapidly as ordering. Again, equipment and cost are major limiting factors. Trans-
mission of text and graphics is either by telefacsimile through telecommunication links or by satellite communication, and cost is affected by the distance of the transmission. Satellite transmission is not so affected, and costs are dropping as more satellites are launched.

The ADONIS (Advanced Document Over Network Information Services) Project, which was covered in both the 1981 and 1982 review articles, failed before it could be implemented because three of the publishers who were involved in the development consortium withdrew. The remaining members decided not to continue with the project as originally conceived (Lambert, 117).

There are other document delivery projects either in development or in experimental phases. The British in particular are focusing a great deal of effort on the concept: there is a project underway with twelve libraries which have been loaned facsimile equipment by the British Library Research and Development Department. In addition to communication with each other, the libraries also have access to the British Library Lending Division. Because of expense, major use is expected to come from the business and commercial community (Lambert, 119–120). The Smithsonian experiment within four of its branches resulted in the finding that telefacsimile could be justified for urgent items but that such material was infrequently needed (Lambert, 120). While telefacsimile itself speeded delivery between branches, most time lost when responding to requests for information was due to internal operations. Further, equipment limitations such as the inability to handle bound volumes, speed of transmission, and quality of resolution, affected what and how much could be sent (Toney).

**CATALOGING AND BIBLIOGRAPHIC CONTROL**

Cataloging issues in 1984 and 1985 were minor compared with the storm surrounding implementation of AACR2 in 1981. Still, there were some issues that generated a good deal of discussion and have resulted in changes for serials catalogers.

The main topic at the 1984 ALA Midwinter Meeting of the Serials Section Committee to Study Serials Cataloging was the proposed modification of the International Standard Bibliographic Description for Serials [ISBD(S)]. The modification was intended to harmonize the description as closely as possible with other formats such as monographs and nonbook materials. Attendees at the meeting reacted negatively to the proposal for the cataloging of microfilm reproductions, which follows neither AACR2 as written nor LC’s current practice of describing the original in the body and the reproduction in a note. Other controversial aspects of the proposed modification included the provisions to treat minor title changes as notes, create new records when there is a change in the entry form of an issuing body for a serial entered under title, and cite key title and ISSN rather than the catalog entry form in linking notes. Further, the proposed modification would result in a much fuller catalog record than the current augmented level one that is LC practice and thus the national norm (Kovacic, 97).

The linking of AACR2 and AACR1 records has been a continuing
problem for serials catalogers since the inception of the new rules. CONSER has addressed the issue in its new editing guide, and LC will assume responsibility for recataloging the problematic record (Kovacic, 98). This means that increasingly more linking records found on the CONSER database will not require local recataloging. However, one wonders, in light of federal budget cuts, if LC can handle the workload. The history of LC’s problem with authenticating CONSER records gives us little assurance of its ability to do so.

A significant variation between the MARC format for monographs and that for serials was the use of the 650 and 690 fields for subject headings. As the two formats were brought more in line with one another, the use of 690 and 691 for locally assigned LC subject headings became obsolete (Edgerton, 2-3). Serials catalogers were dismayed to find those subject headings dropped from CONSER records, even some fully authenticated records, rather than translated to 650 and 651 fields by machine match. While the intent is valid, the result means more work for serials catalogers.

Surprisingly, at least to this writer, the old controversy of latest versus successive entry was again debated, with a new twist this time. The question at hand was whether in an online environment it really made any difference what system of cataloging was used. The advantages to successive entry are that the complete history of a publication does not need to be known and that a holding symbol attached to a record provides a more accurate reflection of the library’s holdings. Successive entry, however, requires linking notes, multiple entries, and complex issuing body notes for publications entered under title. Latest-entry cataloging, on the other hand, requires no linking entries, a method that can be confusing, and there is only one entry to describe the complete history of a serial publication. Still, latest-entry cataloging requires recataloging with each change and can produce inordinately long records which mitigate against the online environment (Kovacic, 98). The CONSER project has added to the debate by approving Northwestern University’s request to use latest-entry cataloging within the project. Flaspeter and Lomker (1985) have joined the debate and provided food for thought with their article on cataloging serials from the earliest entry.

Their thesis argues that the online environment allows for a variety of access points. Thus, cataloging a serial by successive entry or latest entry is really no different from cataloging from the earliest entry. The latter form is more precise historically and, in an online environment, simply requires modification with each publication change. Attention to providing sufficient access points is all that is really needed.

The CONSER Abstracting and Indexing Coverage Project is perhaps the most notable activity affecting bibliographic control of serials during 1984 and 1985. The project began in late 1983 under the auspices of ARL and the National Federation of Abstracting and Indexing Services. Its intent is to enrich the CONSER database by adding abstracting and indexing information wherever possible in order to link library catalogs and abstracting and indexing service citations (Daval, 198). The project was originally planned for completion in April 1985, but additional funding carried it to April 1986. An analysis of overlap done by project
staff shows that, by the end of 1985, abstracting and indexing citations had been added to some fifty thousand unique CONSER records (Blixrud).

**COLLECTION MANAGEMENT**

The literature on serials during 1984 and 1985 contained several articles on collection management. The financial crunch experienced by libraries in the late sixties and early seventies has not proven to be a one-time phenomenon, but rather an ongoing concern. Librarians have come to understand that realistic plans must be developed to serve as mechanisms for controlling serials budgets while still providing adequately for the needs of their user communities.

Both Bensman (1985) and Broadus (1985) discuss the increasing role of citation indexes in evaluating serials collections. A library could begin its review of journal titles by comparing its lists of titles against the *Journal Citation Reports* of Science Citation Index and Social Science Citation Index. Such a comparison could generate a value ranking based on the number of times a journal was cited. Using this ranking libraries can then produce a listing of the most likely candidates to be cut if cuts are necessary. Broadus proposes that citation counts are simpler and more economical than most library-use studies. Libraries, of course, should consider their own user communities and may very well choose to retain little- or never-cited journals because of local popularity. Still, the method provides a reasonable starting point when cuts must be made.

Bensman goes a step further than Broadus by establishing a theoretical framework showing how usage of a library's journal holdings tends to be concentrated on a relatively small core of titles. He sees this as a function of a series of sociobibliometric laws based on the principle of cumulative advantage. If his thesis is accepted, libraries (particularly academic) should not aim at comprehensive collections but should focus their efforts on developing and maintaining a relatively small, multidisciplinary core of heavily used titles that rank high in the information and social system of scholarship” (Bensman, 24).

Brunstjen and Carter (1984) detail a different method of dealing with subscription cancellations, one that is based on the concept of regional resource sharing. Their description of the Pittsburgh Regional Library Center Serials Cancellation Project provides some insight into problems of and potential for using an online catalog for multiinstitutional collection management decisions.

Kaiden (1984) describes how a financial crisis and loss of credibility with faculty in an academic institution led to the development of a serials management system. Besides the obvious benefits of an online catalog, the system was able to provide necessary management reports for assistance in making collection development decisions, in preparing budget presentations, and in justifying budget allocations and expenditures.

**RESOURCE SHARING**

The sharing of resources among libraries has become a way of life made possible by our electronic age. Even small libraries have access to major union lists through their regional or state networks, and in some
states such access is further enhanced through regional consortia. OCLC has been a major supplier of union lists by providing its member libraries a union listing capability which could be utilized in a variety of ways. Both private and governmental funding agencies have made possible expanded access to the nation's intellectual resources by providing grant monies for improved bibliographic control, preservation, and collection development projects.

OCLC recently announced the availability of the United States Newspaper Program National Union List (Rappaport). Funded by the National Endowment for the Humanities, this important project includes newspapers in LC and in libraries, archives, and historical societies of fifteen states. Eventually all newspapers published in the United States will be included. Libraries can access the union list online and may also choose to purchase it either in paper copy or on microfiche.

The Southeastern Association of Research Libraries Cooperative Serials Project is of particular interest because the union list it is developing utilizes the MARC communications format. Originally begun in 1981 with eight libraries, it has grown to thirteen participants, all of which are ARL libraries in the Southeast. The ultimate goal is to provide a database of serial holdings which can aid in cooperative collection development and interlibrary lending (Fry, 295).

Pond and Burlingame (1984) present a library cooperation model involving serials and based on philosophical principles. Cooperation, or the willingness to work together, requires coordination of beliefs, attitudes, and actions—only then can common objectives be established. The authors describe a cooperative project between Bowling Green State University and the University of Toledo whose goal was to increase the number of available serials to users of both libraries. The principles could be applied to cooperation of any type, and the article provides an interesting framework for developing a cooperative plan for maximizing use of library collections.

It would not be fitting to end this review without acknowledging the generosity of R. R. Bowker Company in its willingness to establish and fund a serials librarianship award to be given by the Serials Section of RTSD. The first Bowker/Ulrich's Serials Librarianship Award was presented at the ALA 1985 Annual Conference to Marcia Tuttle, Head, Serials Department, University of North Carolina at Chapel Hill. The purpose of the award is to recognize those who have shown "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 better management of serials, or other advances leading to a better understanding of the field of serials" (Wright, 392). Marcia Tuttle was chosen as the first recipient for her contribution to the literature on serials with her Introduction to Serials Management, published by JAI Press in 1983; for her work with the RTSD Serials Section; and for her work with the U.K. Serials Group. Her dedication to the field serves as a model for the rest of us.

The Bowker Company has been an important force, providing good source information on serials for libraries. The company products repre-
sent a form of resource sharing—the dissemination of information—which serialists have come to expect as routine support for getting their jobs done. Were Bowker eligible, the firm would be a worthy recipient of its own award.

REFERENCES


THE SECOND EDITION OF Anglo-American Cataloguing Rules was published almost eight years ago, and the national bibliographic agencies and a large number of other libraries have applied the code for more than five years. With the trauma of the transition to AACR2 from other codes now largely absorbed, one might assume that other matters might occupy those involved with descriptive cataloguing. Not so.

Perhaps simply because it is at the core of most descriptive cataloguing, books and articles directly related to AACR2 predominate in the professional literature of this field: certain provisions of the code remain open to question, with alternative solutions proposed; all of the chapters treating the description of various media now have their "supplements" or "glosses" interpreting and expanding the code; the collected rule interpretations from national agencies now approximate the length of the code itself; manuals and guides to the use of AACR2 continue to appear. Of code making there shall be no end.

Beyond the specifics of descriptive cataloguing per se, a substantial amount of information has been appearing on authority control. As computer-based cataloguing and network participation continue to increase, the sometimes casual attention to control of headings previously exercised by many libraries is giving way to serious attention to methods for providing standardized access and sophisticated reference structures.

Recataloguing, one of the oldest of cataloguing problems, has resurfaced in a new guise—with additional complications. Now called "retrospective conversion," it is a major current preoccupation for many libraries, and the literature is full of alternative solutions, as well as some soul-searching regarding the degree to which the quality of cataloguing may be improved as existing manual records are transferred to machine-readable form.

Publications concerned with theory, principles, and serious consideration of alternatives for the future appear intermittently but are not frequent. Some reports of experiments in expert systems, using artificial intelligence applied to descriptive cataloguing, are beginning to appear; no breakthroughs have occurred, but this is one of the few areas where

C. Donald Cook is Professor and Ellen Jones is Public Services Librarian at the Faculty of Library and Information Science, University of Toronto.
authors are concerned with possibilities for the future rather than with today's direct applications. Much has been published on electronic publishing, but the implications of many of its forms for descriptive cataloging have yet to be addressed.

Finally, in surveying the literature of the past two years, one can note that if good cataloguers are wanted (as the title of one article suggests), those entering the field continue to be well served by new and improved editions of cataloguing manuals and textbooks.

**BIBLIOGRAPHIC CONTROL**


Barriers to the development of a national database for bibliographic control of library materials are not predominantly technical but are principally those created by people. Adhering to established standards, agreeing to a course of action and persevering with it, and dealing with change so as not to destroy progress should contribute to future developments.


New technology strengthens the need for and demands wider acceptance of bibliographic standards. A cogent and eloquent presentation of the importance of standardization at all levels.


A brief survey of large research libraries indicating the types of materials for which various types of minimal-level cataloging are used. One-third of the libraries used the National Level Minimal Bibliographic Record.


OCLC and UTLAS' experience in merging disparate records, and the existence of UNIMARC, indicate that machine-readable records under author and title elements, in different languages, could be merged into a viable international catalog containing holdings in libraries of different countries.

**AACR2—GENERAL**


Recasting AACR2's chapter 21 ("Choice of Access Points") to "eliminate" the main entry and replace it with a set of appropriate access points indicates that this may be done satisfactorily for the "focal access point for an item." Probably it cannot be done and retain a "focal access point for a work."


A study of AACR2 headings for corporate names entered in direct order indicates there is already a high degree of consistency in use of these headings among national agencies; standardization is being achieved, although certain areas still require attention.


Substantial sections of *AACR2* (chapters 7-11, 23, 26 omitted) illustrated by reproductions of LC cards and modified by LC rule interpretations through summer 1983; arranged in rule number order, with useful index.

An examination of the desirability of reducing or eliminating subordinate entry for corporate bodies in favor of direct entry with qualifiers. Greater consistency would be achieved, but international agreement would be unlikely.

An overview of descriptive cataloging since 1960, suggesting that the area has largely stabilized. Interest now centers on expanding the provisions of *AACR2* for materials which were not covered; problems in forms of corporate names, the use of uniform titles, and the concept of main entry require additional attention as the technology of the online catalog develops.


Lin, Joseph C. "Rule of Three: A Case of Discrimination Against Certain Authors Caused by the Cataloging Rules," *C&CQ* 5, no. 4:53-65 (Summer 1985).  
The failure of *AACR2* to provide access points for all authors sharing responsibility for a work hampers users and acts as a concealed form of censorship.

Updated quarterly.

Correct use of *AACR2* for certain Slavic geographical, corporate, and personal name headings may result in headings which actually are incorrect. Suggestions are made for dealing with these problems.

Recommends deletion of *AACR2* Rule 24.13 Type 5, suggesting that other rules for direct entry and subordinate bodies deal better with the situation.

Divergences in the concepts of "authorship" and "responsibility" for scientific and technical documents among abstracting services and between these and standard cataloging practices suggest further examination of these approaches in terms of online access.


A substantial enlargement of the 1981 edition; covers chapters 1-12 of AACR2, with examples largely from LC practice. Keyed to specific rules. Good index.

Shore, Melinda L. "Variation Between Personal Name Headings and Title Page Usage," C&CG 4, no. 4:1-11 (Summer 1984).

Variations between personal name headings in the catalog and the use of authors’ names on title pages suggest that more research is needed for standardization and better authority control.


Covers Cataloging Service Bulletin no. 1 (Summer 1978) to no. 27 (Winter 1985); includes rule index to CSB.

**SPECIFIC TYPES OF MATERIALS**

**CONFERENCE PAPERS**


Results of a study of the citations for fifty conference papers in chemistry suggest that conference proceedings are customarily cited like any other work of collective authorship and that the conference name is of little value as an access point.

**GOVERNMENT DOCUMENTS**


Intended to clarify rules in AACR2 that are unclear with regard to government document cataloging, to address special features of government documents pertinent to cataloging that remain unacknowledged by AACR2, and to interpret these features in a manner consistent with the spirit of AACR2.


Describes cataloging records on the GPO MARC tapes, on OCLC, and in the Monthly Catalog, and introduces a cost-effective method of using these records in a library catalog. Presents a proposal for the comprehensive correction and updating of these records.


The availability of USGPO machine-readable tapes now makes it practical for librarians to make cataloging for documents readily available through the library's regular cataloging channels.

**LEGAL LITERATURE**

Enyingi, Peter; Lembke, Melody Busse; and Mittan, Rhonda Lawrence. Cataloging Legal Literature: A Manual on AACR2 and Library of Congress Subject Head-

Discusses rules in AACR2 and LC subject heading practices which represent common problems for legal literature; includes substantial treatment of choice of entry and the establishment and formulation of uniform titles.

Pamphlets


The provision of AACR2 first level of description for pamphlets may be a desirable and practical compromise between single subject assignment and full cataloging, particularly in relation to machine-readable databases.

Rare Books


Increased use of machine-readable records for rare book cataloging has brought about changes in description, access, and data formats; changes still are needed for copy-specific information, provision for more flexible retrieval, expanded MARC records, and diverse hard-copy products.


A major expansion and revision of the original 1977 version, designed to accommodate AACR2 to the extent possible, to assist in matching records contributed by participating libraries, and to increase the provisions for use of the MARC format.


A nonconventional cataloging system using OCLC's MRDF and dBase II has been developed to provide economical access to a unique collection; the system could be adapted for many other types of special collections.


A survey of rare book and special collections in the U.S. and Canada providing data for cataloging costs at levels higher than AACR2, personnel, compensation, unit costs, backlogs, standards in practice, accommodation of automation and networking, methods of providing access, and acquisition activities. Current practices are not yet rationalized into an integrated system for bibliographical control of rare books and archival control of manuscripts and records.

Technical Reports


Differences in treatment of corporate bodies, report and funding numbers and physical description are reported; thesis require consideration in achieving bibliographic control of this type of publication.


Emphasis is on illustrating use of the MARC format specifications for technical reports in order to provide the additional information not normally required for book materials.
Western European Materials
Greater language and subject skills are needed, suggesting the desirability of cooperative specialization in establishing headings in less well-known languages, and further international standardization.

Audiovisual Materials
Bibliographic control of audiovisu­als is not widespread and expanded and improved audiovisual cataloging by LC and the National Library of Medicine would substantially contribute to that goal.

Discusses the contributions of AACR2 to audiovisual cataloging, the revisions of the MARC Films Format and the inception of the AV-CIP program for micro­computer software.

The 1981 edition has been substantially revised and enlarged, examples have been added, and subject headings have been included. Cartographic materials continue to be omitted, but a major new section on microcomputer software has been added.

Theses
A survey of university libraries' cataloging of theses from their own institutions suggests that additional provisions, such as a uniform access point for a thesis as a thesis, are desirable.

Music and Sound Recordings
Procedures for achieving physical and bibliographic control of sheet music, using the MARC scores format and cataloging similar to rare book treatment.

The requirements for bibliographic control of music fit neatly into the theoretical structure for all bibliographic control. Where the concept of responsibility is relevant, access is provided through the names of composers or performers; systematic access is provided through co-equal facets: medium, manifestation, and form.

Terminology used in the bibliographic description of music and sound recordings; only in exceptional cases is terminology included that can be found in standard music dictionaries.
**Motion Pictures and Videorecordings**


Examines a model for a surrogate to facilitate user selection of the most appropriate film or video work for a particular use. The proposed surrogate is seen as a system for achieving an individual, more book-like use of film and video documents.


Comprehensive instructions for cataloging materials held by film and television archives, done within the framework of the ISBDs as reflected in chapter 7 of *AACR2*.

**Graphic Materials**


Attempts to develop a theoretical basis for the descriptive cataloging of pictures in order to provide means of evaluating, adapting, and applying existing codes and formats, or for devising new ones.


Intended to serve as a cataloging guide for curators of photographic collections dealing with scientific, social and historical subjects rather than with art.

**Machine-Readable Data Files**


An expansion and interpretation of chapter 9, "Machine-Readable Data Files," for use pending official revision of this chapter by the Joint Steering Committee for Revision of *AACR*.


Discusses problems involved in the application of the ISBDs to machine-readable files, including data files and computer programs.


Recommends changes in chapter 9 in order to provide adequate bibliographical control of microcomputer software.


Designed to assist in the understanding and application of chapter 9 and *Guidelines for Using AACR2 Chapter 9 for Microcomputer Software*, to identify associated problems and recommend solutions, to discuss the use of the hardware and software components of a microcomputer system in the catalog entry, and to highlight the relationships to other *AACR2* chapters for special materials.

Intner, Sheila S. "Problems and Solutions in Descriptive Cataloging of Micro-
An evaluation of the terminology, description of the physical manifestation of an item, notes describing related hardware, and materials covered by **AACR2 chapter 9** and **Guidelines for Using AACR2 Chapter 9 for Cataloging Microcomputer Software**.


An experimental project using **AACR2 chapter 9** to catalog over 200 microcomputer programs, resulting in recommendations for bibliographic control, guidelines for publishers, cataloging standards, and a brief manual of practice.

**SERIALS**


A compilation of actual notes used in LC serials cataloging; arranged in **AACR2 rule-number order**.


A revision of the 1981 manual, incorporating interpretations of **AACR2 and the MARC Serials Editing Guide**.

**AUTHORITY CONTROL**


Discusses the basic purposes and operations of authority control, and whether this control is better exercised nationally, by utilities, or by individual libraries.


Four concepts in artificial intelligence (pattern recognition, representation, problem solving and learning) already are used in automated cataloging. Analyzes basic concepts in authority control and suggests that artificial intelligence may change authority control from choosing a proper heading with references to identifying only the various manifestations of a name under which a user would search.


The first general text on name authorities; covers general principles, creation of authority records and implementation of authority systems, the use and maintenance of systems, measurement and evaluation, description of state-of-the-art systems, the machine-readable name authority format, and future trends.


Discusses the necessity for authority control, control in an online environment, imposed standardization, control in shared databases, control at remote sites, references in an online system, quality control, integrated versus separate files, components of an authority system, and costs. Questions whether choosing an authorized form of name is obsolete.
Describes the Name Authority Cooperative (NACO), its operations, and its relationship to the Linked Systems Project.

Discusses various levels and types of authority control; suggests that many librarians may not be sufficiently aware of these or of the indirect effects of authority control on the materials in a collection and on local integrated systems. Part II published in Library Journal 111:55-56 (Jan. 1986).

A new international "standard," prepared as part of IFLA's continuing effort to further internationally compatible practices in descriptive cataloging.

Although libraries rely on national agencies, utilities, and cooperative activities for authority data, individual libraries still need local control for original cataloging and for integration of old headings with new or changed headings.

Optimal return on the retrospective conversion investment includes the improved access that authority control provides. A vendor's system for incorporating authority control with conversion is described.

Representing library management, the author maintains that the most economical way to implement authority control is to use the LC catalog as a base; not only is it efficient to follow LC, but there is the added advantage that users benefit from the consistency across catalogs that is achieved by following this standard.

In supporting authority control, the author describes two research projects indicating that current methods of cross-referencing are not adequate but that programs are available which would have given much greater assistance.

Various methods of automated authority control available at present are described and analyzed. Questions to ask when considering the purchase of a system are suggested. An appendix lists thirty-two networks and vendors.

Describes a research study indicating that a substantial number of the cross-references catalogers routinely make for searching manual files would be unnecessary for searching MELVYL, using keyword indexes.

Preliminary report of poll to determine current opinion of U.S. librarians on future computerized systems for authority control. Current practices, problems, and expressed needs are described.
Retrospective Conversion


Fourteen papers describing specific retrospective conversion projects; introduction summarizes general problems.


Discusses need in terms of user problems related to split catalogs in various formats. Difficulties to overcome include ownership of the records, costs, nonroman scripts, standards, and inhospitality of MARC for some media.


Considers planning and decision making; accommodating full records; conforming to standards; creating bibliographic records; bibliographic utilities and stand-alone systems as sources of support; use of microcomputers; conversion of patron records; equipment, telecommunications, and labor costs, and database creation.


Describes and summarizes the CLR RECON report, outlines the retrospective conversion activities of WLN, RLG and OCLC, critiques the RECON report, and presents recommendations for action.


Use of vendors involves consideration of the basic reasons for using vendors, conversion methodologies, and vendor selection criteria (including database available, local data, accuracy, charging, schedule and delivery time, local compatibility, impact on staff, escape clause, and references).


Considers the generation and use of machine-readable bibliographic records in general, the sources of cataloging and retrospective conversion, and the criteria for selecting sources of machine-readable bibliographic records and/or cataloging. Describes and evaluates the services of twenty-two vendors.


A cost model for investigation of alternatives for retrospective conversion is presented, including advice on random sampling, gathering information, and the steps necessary to cost the project.


Useful review of current recon activities; suggests that many additional small- and medium-sized libraries will embark on conversion efforts that will create a substantial number of machine-readable records and that the pressures to automate will continue to fuel recon projects in all research libraries.


Major sections cover (1) a framework for analyzing retrospective conversion, a definition, a summary of past efforts, a description of current activity, and possible future developments; (2) major strategies for conversion; (3) economics of conversion; and (4) options for a systematic approach and recommendations for a national strategy and proposed implementation.


Recommends selected publications reviewing issues and concerns for library management.

**MANAGEMENT ISSUES**


Concern is expressed at the continuing high level of change in codes, schedules, and formats and the cost to libraries of monitoring and implementation. Library managements should assume a controlling role in the development and modification of cataloging practice against a background of better knowledge of user needs.


Efforts to clean up and match records in automated systems often are hampered by the realities of installed systems which differ from the original plans, the need to maintain dual catalogs, incomplete documentation for revised procedures, and fluctuating job responsibilities. Includes 10 examples of catalog maintenance procedures, job descriptions, and organization charts from five institutions.

---


Documentation from ARL libraries covers practices in copy editing of derived records, minimal-level cataloging, authority work, retrospective conversion, and quantitative expectations for individual catalogers.


The alternative to change is stagnation. New cataloging rules provide a tool by which the whole bibliographic environment can be changed in response to new technology, to changes in the bibliographic universe, and to developments in cataloging theory. A continuing alliance between library administrators and
Descriptive Cataloging 1259

bibliographic experts is needed to manage change in bibliographic systems and to reconcile bibliographic imperatives and financial exigencies.


Attributes the dearth of well qualified catalogers to (1) the women's movement, which has enabled qualified women candidates to enter many other fields previously unavailable to them; (2) the increasing importance of special and corporate librarianship, with higher salaries and an image perceived as more "mainstream"; (3) the possibility that library schools are conveying the impression that cataloging is an undesirable occupation.


Describes methods used for the maintenance of bibliographic records in online catalogs and compares them with maintenance in the conventional card catalog. Concludes with a discussion of the similarities and differences between the two types of catalogs and reflections on the impact of the online catalog on bibliographic record maintenance operations.


In addition to the cataloger's role as manager, planner and scholar, the author stresses the importance and integrity of the catalog and the central position of the cataloger in serving user needs.


The library catalog will very likely change into something that bears little resemblance to the instrument we currently know. However, the catalog will remain the complete and perfect memory of all that has been added to a collection, and communication with that memory will be greatly facilitated. It will also remain the principal means by which readers help themselves to use the resources of a library or a network. Because of its undiminished central role, it will also remain a favorite object of disagreement.


The lack of applicants for entry level cataloging positions is attributed to (1) the decline in the number of library school graduates; (2) inadequate starting salary levels; (3) lifestyle preferences for "sun belt" regions; and (4) the reduced attraction of cataloging positions when library school graduates contemplate the "glamour" of reference and automation positions in libraries and information centers.


A study of school library media specialists in Nebraska indicates that despite the availability of centralized processing in many school districts, school librarians continue to do a substantial amount of cataloging and express interest in continuing education related to cataloging.

At the University of Michigan Library, creation of an automation unit, elimination of unnecessary procedures, use of derived records on an "accept unless conflict" basis, and other new cataloging processes have increased production despite reduced funding.

**EXPERT SYSTEMS**


Describes a research project in artificial intelligence to explore the feasibility of creating an expert system for cataloging which would be capable of applying many AACR2 rules automatically and would also cope with rules governing local practices.


Report of a Swedish project to investigate the possibility of applying techniques of artificial intelligence to the use of AACR2 in an expert system; experiments have used chapter 21, "Choice of Access Points," and work is beginning on chapter 22, "Headings for Persons."

**MANUALS**


Continues as a useful basic text. Now reorganized to incorporate AACR2. Use of microcomputers in small libraries mentioned but not developed.


Not a full basic text, but an unusually good elementary manual for the guidance of persons with little or no professional training.


Anthology of seventeen basic contributions to descriptive cataloging theory of the last 150 years; principally for teachers and students of cataloging.


Continues as a useful introductory text; use of AACR2 reorganized, and emphasis increased on computer-based services, although use of microcomputers is not considered.
A Survey of the Literature on Subject Analysis for 1984–1985

Doris Cruger Dale and Betty-Ruth Wilson

This review of materials published in 1984 or 1985 includes books, journal articles, dissertations, microfiche documents, and papers presented at conferences. Selections include publications on book classification, subject headings, thesauri, and those articles and books on indexing thought to be useful to subject catalogers or teachers of cataloging and classification. All issues of selected journals were searched; newsletters, free publications, journals in foreign languages, and journals published overseas that were not easily available were excluded. Items which were not seen but for which reviews or other descriptive material were available are marked with a double cross at the end of the abstract.

The need for improved subject access to library collections was the major theme in the literature of these two years, and the new computer technology was seen as a way of providing the means to achieve this goal. There were many articles on LCSH including some which suggested changes and additions, or the use of alternative lists. A large number of thesauri were published during these two years, many of them covering specific databases or subject areas. Two Spanish-English subject headings lists were published. The publication of the second edition of the PRECIS manual prompted the appearance of many articles, as did a research project at OCLC on the use of the Dewey Decimal classification for online subject searching. New editions of Bliss (Class K), DDC (004–006 and the Arabic edition), UDC (a new medium edition), and LCC (new editions of religion and education and two new law schedules) were published. The Colon Classification also received attention in both books and journal articles. An international interest in classification and subject headings was evident throughout this period.

CLASSIFICATION


Doris Cruger Dale is Professor of Library Science in the Department of Curriculum, Instruction, and Media and Betty-Ruth Wilson is Assistant Professor and Assistant Cataloging Librarian in the Morris Library at Southern Illinois University. The authors are grateful to Dorothy Frailey, Jo Ann Blackwell, Ruth Bauner and her staff at the Morris Library, and to Pat Stenstrom and her staff at the University of Illinois at Champaign-Urbana for their assistance.
Neither LCC nor DDC provides a satisfactory classification for African literature, which has emerged as a new basic subject and for which a new main class should be created. Two appendixes provide brief guidelines for the construction of a new African literature main class PV. This class will comprise African Literature—General, African Literature in the European Languages, African Literature in the Indigenous Languages, and African Literature in Arabic.


One of a series of four basic books designed to help library workers in church media libraries, it has three sections: classifying books using the abridged edition of DDC, cataloging church media library materials, and cataloging media by subject using the Sears list of subject headings.


The chairman of the Social Sciences and History Committee of the Universal Decimal Classification reports on the meeting in Moscow and on other activities of the committee. Eight subcommittees are cooperatively working on revisions. This work is done by unpaid volunteers. A new management study of UDC is currently being conducted which will address the problems of time delays, updating, and publication.


Contains an outline of the complete Bliss classification, a detailed introduction to Class K Society (which also compares this class in BC2 with BC1), an outline of Class K, and the full schedules for this class. Includes an index. Developed by J. Mills and Vanda Broughton with the assistance of Valerie Lang.


This guide to science fiction, fantasy, and supernatural horror in LCC and LCSH includes common subject headings used through mid-1984, author and artist main entries with LC class numbers, motion picture title main entries and class numbers, and the LCC schedules for subjects in this field, with an alphabetical index to the classification numbers. Names are based on AACR2 wherever possible. Class numbers are those used through mid-1984 including bracketed numbers in the period from 1969 to 1980.


A short first chapter defines local government documents and then discusses them in terms of acquisition, bibliographic control, cataloging and classification, publicity for the collection, reference service, archival retention, separate versus integrated collections, and local government information stored in computer databases. A short last chapter discusses indexing of these documents. Seventeen individual classification schemes which could be used to classify local government documents are evaluated. They include three types: subject arrangements, archival arrangements by issuing agency, and one with computer applicability.

Reports of members' research on classification systems, classification of phenomena and disciplines, logical structure of main classes, proposed revisions of the Bliss Bibliographic Classification, a classification scheme for community information, a chemical sciences thesaurus, and the use of classification in online searching. Includes a bibliography of writings by members and a list of members.


Describes the OCLC research project using selected portions of the DDC schedules and relative index to create an online searcher's tool for subject access in an online catalog. Many online catalogs provide access by classification number, but searchers must know the exact class number. In the OCLC project, classification records provided the following benefits: browsing capability, enriched subject description, up-to-date schedules for editing and shelf-listing, and a tailored version of the library's classification practices.


A historical description of the use of DDC abroad especially in India. For effective classification, local subjects must be developed locally. This can be done through authorized or homemade versions.


This paper presents a few of the ways in which libraries with a special emphasis on areas studies handle classification to provide a geographical approach to their collections. The systems described are those developed and used in six libraries the author visited in Great Britain and South Africa.


Authorized by the Dewey Decimal Classification Editorial Policy Committee, this new and greatly expanded schedule for computer science and computer engineering is designed to accommodate the rapid growth in these fields. To make room for expansion, computer science has been moved to 004-006 and computer engineering has been moved to 621.39. Includes an index to topics, a manual of application, a glossary of terms, and corrections and changes for the 19th edition.


Many libraries began reclassification projects in the 1970s and then abandoned them because of rising costs and changes in cataloging priorities. The first of two tables illustrates the steps in a manual reclassification project; the other shows the steps in an automated reclassification project. The author recommends that reclassification projects be completed now because they can be done much more cheaply and quickly when working with online catalogs.


This translation is based on the 11th abridged edition and some sections from the 19th unabridged edition in those areas which affect Islam and Arabic culture and history. Volume 1 includes introductory material, the schedules, and auxiliary tables. Volume 2 is an analytical index arranged according to keywords. + +

Presents guidelines for using the three volumes of the 19th edition. The application of the seven tables with suitable examples is also discussed. Three classes of DDC are analyzed in detail: 340, 600, and 900.


Classification and linear shelving of books have caused much information to be buried. The author argues that the book-end index provides the best guide to content. For a random sample of 250 books in six classes of DDC the complete back-of-book index of each volume was transcribed, along with the DDC code, the title, and table of contents. The relative effectiveness of automatic classification is compared to DDC. Automatic classification proved to be more effective than manual classification. The back-of-book index has potential value as a surrogate of the book for purposes of automatic classification. These implications invite further research.


Presents ten tables showing modifications of the National Library of Medicine WM schedule for psychiatry.


The author comments once more on the treatment of sensitive subjects—religion, politics, sex—in LCSH, UDC, and DDC 19. He offers no solution, but suggests that the profession must reappraise what it is trying to do.


The basic structure of the scheme with its 42 main classes is explained, after which the author describes how class numbers are created and synthesized. Class numbers are created by stringing together letters, numbers, and punctuation marks representing main classes, facets, and devices for putting all together. The Colon Classification concept of phases allows the classifier to combine two main classes, something that cannot be done in single-class-number enumerative systems.


This bibliography has identified 179 articles and schemes devoted to theological classification and subject headings. Items are arranged in the following categories: generalia, Dewey Decimal Classification, Library of Congress Classification, Roman Catholic classification and modifications, Union Theological Seminary classification, other special classification schemes and modifications, and subject headings.


A revised edition of a 1981 publication. The classification scheme presented for pictures and slides is divided into seven main classes. For each class a color code is suggested for labeling slides and pictures. The main classes are: arts and humanities, nature, nature in the wild, photo travel, pictorial journalism, technology, medicine and science. There are indexes for three of the classes: arts and humanities, medicine, science and technology.

A survey was carried out in a public library to group books by subject categories rather than by DDC. The response from patrons was disappointing as the new arrangement proved not to be more convenient for users. The author concludes that the case for categorization has not yet been proven.


Because classification of fiction has posed a dilemma for librarians for many years, the author conducted a survey of the classification practices of large library systems in the United States. The majority of libraries physically separate adult fiction from adult nonfiction. A large percentage of libraries use genre categorization to arrange a part of their fiction collection. The author concludes: "We now know what we are doing, but are we sure of the whys?"


The "Cataloging and Classification Policy" of the Hennepin County Public Library, adopted in May 1979 and revised in December 1982, is published in full.


The author presents the thesis that in the United States call numbers are used primarily for arranging and locating books. She claims that both DDC and LC are nontheoretical. Because of this, the possibility of using classification in subject searching online has its problems. Some of these are classification schemes are not easy to use; numbers have not remained static; they are often inconsistently assigned; a book can be classified in only one number; call numbers are accepted from external sources; numbers are not assigned for the purpose of subject searching but to park a book; and classification may not be as well suited to machine searching as might be thought. The future of classification access must take into account these factors.


Classification in the American context grew out of certain principles of American librarianship. These were open stacks for browsing by subject, a pull towards uniformity, and the development of the theoretical DDC and the pragmatic LCC. Classification receives much less attention than subject headings for several reasons. The author is convinced of the advantages of classification for subject retrieval across international and linguistic boundaries, and he cites his reasons. He believes the computer may bring back the classed catalog for online subject access.

---


Computer technology will lead to changes in subject access which may cause problems for Third World libraries. Some of these changes include high telecommunications costs, free-text computer searching, removal of classification in cataloging data, method of transmission of data, selection of index terms, use of cross-reference structure, expansion of controlled vocabularies, and new filing rules. IFLA must provide a forum for the needs of Third World libraries so that the technological gap does not become too large.

The author, who was very close to Ranganathan, discusses the theory behind the scheme and the process of number building. The first part of the book is a theoretical study of the scheme. The second part is devoted to a chapter on each of the main classes and generic classes. The current status of the scheme is discussed in the third part. The last part of the book is a selected bibliography with about 350 entries.


Kaula surveys the development of classification schemes from the Aristotelian categories and Baconian classification to other schemes of knowledge classification, both those without notation and those with notation. With the exception of Bliss' Bibliographic Classification, all the major classification schemes were designed without the enunciation of any theory. Ranganathan developed his theory after the Colon Classification was published. The author proposes that this dynamic theory be applied to schedule designing in UDC.


The purpose of this study was to determine variations in the association between LCSHs and LCC and DDC notations in a database of more than 100,000 MARC records. As the number of LCSHs per record increased, the association decreased; and LCSHs listed first had a significantly higher association with class notations than succeeding headings. The author concluded that class notations are not consistently assigned to subject headings.


Updates the first edition of 1972: *Easy Method for Inventory-Taking and Classification of Audio-Visual Material*. There has been much deviation from that edition because audiovisual materials have evolved and changed so rapidly. The English text is all in capital letters in the left column of each page, and the French text is in lowercase letters in the right column. This system is designed to be used with objects rather than with concepts and provides a unified approach for all categories of materials. The classification codes are preceded by a section on how to use the codes, filing and code arrangement, main code table, and secondary tables. Illustrations are used for the various audiovisual materials, objects, and containers.


At the University of Nebraska at Omaha it was decided to classify bibliographies in political and social science with their respective subjects. The scheme, presented in the appendix, is being implemented in the reference collection. The authors recommend that LC develop new classification numbers for subject bibliography in the subject schedules.


The following volumes of the LCC schedules were published in 1984 and 1985: *Class B. Subclass BL, BM, BP, BQ. Religion: Religions, Hinduism, Judaism, *


This article is in Chinese with an abstract in English. The author discusses the "Chinese Chronological Subdivision Table" of the New Classification Scheme for Chinese Libraries, currently in widespread use in Taiwan. Some errors are pointed out, and suggestions for revision are made.


___. "Peoples of Melanesia: Proposals for Revision of DDC 19, Table 5," C&CQ5, no.4:47-51 (Summer 1985).

These three proposals were prepared for discussion by the Dewey Decimal Classification Editorial Policy Committee. The first, developed by the National Library Service of Papua New Guinea, is an expansion of table 2 in DDC 19 for Melanesia and for Papua New Guinea and its historical periods (995.3). The second is a five-page proposed revision of the language table (table 6) to take account of the facts that more than 1,000 languages are spoken in the Melanesian region and that material is published in about 160 languages. In the third the author questions those numbers in table 5 dealing with the peoples of Melanesia, finding no reason for two subdivisions for Papuans and Melanesians since Papuans are Melanesians or for combining Micronesian and Melanesian in the same notation. He proposes a more rational shelf arrangement in topical areas requiring the 089 standard subdivision and table 5.


Arguing that DDC has enormous problems, the author states that its philosophy is antiquated and the shell is fundamentally wrong. It does not provide very well for current, dynamic subjects such as computers and computing. Public libraries have responded by using a reader interest arrangement for their materials. School librarians have expressed an interest in the idea of retrieval by way of a curriculum thesaurus.


OCLC's Developmental Online Public Access Catalog included in its database headings from the DDC schedules and entries from the DDC relative index as a basis for using classification for subject searches. Because DDC is already in machine-readable form, classification becomes a valuable tool for subject access, browsing, and screen display.


Based on a paper presented at the 51st IFLA General Conference in Chicago,
this article describes the Dewey Decimal Classification Online Project, which focuses on how DDC can be used for subject access online. Three research questions were formulated, and two experimental catalogs were developed. Two tables illustrate how subject searching is done in the Subject Online Catalog (with traditional subject searching capabilities) and the Dewey Online Catalog (with additional subject searching capabilities based on the DDC relative index and schedules). Retrieval tests have been conducted at four libraries.


The first chapters in this monograph are devoted to a description of the growth of the collections at LC during the early years and the provision of subject access under Spofford. Classification development is described in several chronological periods. Several figures illustrate both the changes in LCC and the publication and revision patterns of the various schedules. Designed to be used only by LC, the schedules are now used by more than 1400 libraries including almost 200 in other countries. Also available as an ERIC document, ED 247 953.


This study has analyzed the sociocultural factors that influenced the adaptations of DDC in its translations from English into Arabic, Farsi, Hindi, and Turkish. The purpose was to find guidelines for making future editions in other languages more standardized and compatible with each other. Specific attention was paid to the religion of Islam and its effect on the adaptations. The author outlines the methodology of the study, describes the four editions analyzed, and carries out a comparative study of seven DDC classes. In conclusion she lists the characteristics and shortcomings of the Middle East DDC editions and includes some suggestions and recommendations for future editions.


A survey of public, special, and academic libraries in Kenya has shown that a variety of classification schemes is being used. All are unsuitable for libraries with large collections of Africana. The author recommends the establishment of a classification research group to study the problem of developing a more suitable classification system for Africana.


When the Newlin Collection on Oceans Law and Policy was established in 1976 four separate classification schemes were in use. A new classification scheme was developed which uses a decimal format and emphasizes maritime law and policy. The eleven-page text of the scheme is appended.


The first three chapters deal with the arrangement of documents in libraries and the need, purpose, and kinds of classification. The fourth chapter provides descriptive studies of DDC, UDC, and the Colon Classification. In the fifth chapter, the three schemes are analyzed by topic, such as structure, notation,
auxiliaries, number building, revision policy, and current use. The last chapter is a brief overview of library classification up to 1982.


Thirty-five libraries are using the KF Canadian Adaptation scheme which groups legal materials of countries with common law systems by subject and format rather than by jurisdiction. The subarrangement is then by jurisdiction. This schedule is not intended to break the logical sequence of the LCC schedule. A loose-leaf service is available which ensures fast and regular updating of the KF Adaptation.


The author contends that computers have been misused to create catalogs which are like dinosaurs in museums. Classification is just one of the barriers to effective use of libraries. McCollin's scheme for music is cited as a classification developed from the readers' perspective, as music is grouped in the way it is actually used by musicians.


Literary warrant is a fundamental principle of subject analysis, especially in LC practice. E. Wyndham Hulme proposed this concept as the basis of book classification in a series of articles published between 1900 and 1912. Rodriguez traces the development of this principle through Hulme's writings. Hulme believed that the source of our authority in classifying a book should be the book itself. His system was used by the Science Reference Library of the British Library and by the British Patent Office Library, where he worked. Hulme also used the term statistical bibliography for the method by which the development and the nature of particular fields of knowledge are charted (today called bibliometrics).


This book aims to explain with ample illustrations every rule in the Colon Classification. In the first part theoretical principles and fundamental devices have been given a chapter each. These include the structure, common schedules, common isolates, complex classes, differential facets, book numbers, and filing sequence. In the second part a chapter is allotted to each of the main classes in the scheme. The chapter on book numbers is especially interesting as this method could be used with other classification schemes. The manual concludes with a table of various facets of different main classes, and an index.


After analyzing relocations in DDC 14 and 15, the authors present comparative data on relocations in DDC 16-19. Relocation violates the canons of context (the hierarchy is disturbed), ascertainability (subjects are moved to other classes), and consistency. The authors conclude that relocation is beneficial because it produces more clarity, accommodates more subjects, and prevents the scheme from becoming bulky.


A brief section deals with the classification of music. For music the concept of
aboutness does not work. The critical elements in classifying music are: the medium, the format, and alphabetical listings. Current classification systems are inadequate for classifying ethnic recordings. Automated systems should be used to provide all the necessary access points.


In 1984 the Library Association conducted a survey of libraries in Great Britain and Northern Ireland that were using DDC. Four objectives were outlined, and a questionnaire was designed and sent to 1,000 libraries: public, college, institute, university, and polytechnic. The analysis was based on 504 returns from libraries, all using DDC. Some findings: 51.4% were using the full 19th edition; 133 libraries were using the standard subdivision 016 for bibliographies to arrange them by subject; 186 libraries were using 920 or B for biography; 274 used other classifications in some parts of the library system (UDC, local schemes); 259 used class numbers provided by an external source; and 379 used shorter numbers than DDC provided.


Trotter supports the thesis that DDC is good enough for a subject arrangement of library collections because: (1) most users understand it; (2) principles of subdivision are clear; (3) basic plan remains unchanged; (4) revisions take into account changes in knowledge; (5) it is used widely by national bibliographic agencies; (6) it is used all over the world; and (7) it is responsive to user suggestions.


Comprises two parts: Part 1. Systematic tables, and Part 2. Alphabetic subject index (in preparation); and contains about a third of the material in the full edition. This edition includes modifications made through June 1977 and the new United Kingdom administrative divisions authorized in July 1983. After the introduction and the auxiliary tables, the main tables appear from class 0 to 9. Each entry consists of the class number, the class description, and various instructions. The following sections of UDC have been published separately: UDC-64 Home Economics, 1984, 46p.; UDC-676 Paper Industry, 1984, 39p.; and UDC-666 Glass Industry, Ceramics, Cement and Concrete, 1984, 37p.


Experiments have shown that there is no significant difference in retrieval effectiveness between subject indexing and classification. Classification, which the author defines as the identification and description of like items, the discrimination of unlike items, and the ordering of these items, is suggested as a powerful retrieval tool, especially with numeric database systems.


Presented as a paper at the 51st IFLA General Conference. The IFLA Standing Committee on Classification and Subject Cataloguing is attempting to identify and encourage the research needed on the most effective methods of intro-
ducing classification into online cataloging systems. This study has gone through two phases. An exhaustive literature search was carried out. A questionnaire was sent to North American libraries to collect data on the degree of use made of classification in online catalogs. Directions for research are indicated in the form of questions based on these topics: effective use of computers, use of thesauri, classification online with updated schedules, suitable databases needed for research, and development of appropriate standards.

**INDEXING**


This completely new description of the PRECIS system includes all important developments since the first edition. The principal changes are the result of ten years of experience using PRECIS, which revealed the need for some extra procedures and some new codes, and the growing interest in PRECIS in libraries using other languages. This edition deals with basic relationships that occur in all languages and procedures needed for indexing in such languages as English or French. Chapters 2-14 deal with the techniques of subject analysis and string writing. Chapters 15-18 deal with thesaurus construction. There are five appendixes and an index.


The research which led to the development of PRECIS was based on five goals. Strings of terms are written in an order required by the grammar of PRECIS. Each string satisfies the established criteria. The main components of the grammar are represented by the list of role operators which regulate the forms of terms in the strings. PRECIS is used to form the indexes to several national bibliographies. In these cases it is used as a two-stage index. The *British Education Index* uses PRECIS as a one-stage index. PRECIS has shown its value in online settings, and has the ability to function in other languages. Austin states "the logic that underlies PRECIS can be applied not only to any kind of document, in any subject field, but also in any language."


These recommendations are concerned with general techniques, presuppose analysis by humans and concentrate on printed materials. First, the document should be examined for reference to a product, condition, action, and patient. Second, terms should be derived from natural language. Third, indexers must be able and impartial. + +


PRECIS indexing has been integrated into the products and online facilities of UTLAS (University of Toronto Library Automation System). The author briefly describes the background of both PRECIS and UTLAS and then tells how the PRECIS data were coded in the MARC format using tag 690. The National Film Board of Canada and the National Map Library of Canada use PRECIS indexes for subject access in their UTLAS-generated catalogs. PRECIS has a great deal to offer in the area of subject access especially for spe-

Because the cost of automatic, full-text indexing is still prohibitive, the authors studied the relative effectiveness of less than full-text indexing when using a non-Boolean, chaining type of file structure and searching strategy. The study used 733 reference documents and 38 basic query documents randomly selected by the pleasing color of their bindings from the Health Sciences Library at the University of Texas Southwestern Medical School in Dallas. The authors concluded that no matter how the data are examined, less-than-full-text indexing can achieve optimum results.


In string indexing, a human indexer provides a string of terms, and from each string computer software generates a set of index entries. The author suggests that with the increase in computer power, the customizing of index displays to meet various needs is now possible. Several questions are posed regarding the production of different displays from the same input. Craven states that the hardware is now far ahead of the theory and research in this area.


The publication of the second edition of the PRECIS manual in 1984 marks the end of a decade of development of this system. The author reviews PRECIS under the following topics: background and early history; the system, its vocabulary, rules and procedures, and the output generated by the computer; one-stage and two-stage indexes; the use of PRECIS outside of Britain and in Britain; practice in the British Library; and the new edition of the manual. Two things are still needed: thorough research into the management aspects of the system, and a brief handbook which is complete, clear, and concise.


In this study, PRECIS indexing was applied to 50 articles in psycholinguistics for which subject analysis had been provided by ERIC/CIJE, LLBA/Online, and PsycINFO. The research had two objectives: to discover factors that needed to be taken into account when designing comparative research on retrieval effectiveness of computer searches and to identify extraneous variables. Six factors and three variables were identified. The authors concluded that although this type of research is difficult to design, it provides valuable insights.


A survey of existing systems which might be suitable for the computerization of the indexing of the Sorghum and Millets Information Center in Patancheru, India, turned up none that could be used. This resulted in the development of the Pragmatic Approach to Subject Indexing (PASI) which proved useful because the indexers were knowledgeable in their subject fields and knew the users of the documents. Four steps in the indexing process are described: selection of keywords, standardization of keywords, formation of logical strings, and rota-
tion of the string. Five examples are worked out to explain the steps. System software was then designed to apply PASI, and the system was found suitable to meet the special needs of the information center.


The author describes the two aspects of PRECIS coding: the syntactic coding and the coding which sets up the thesaural network. The first two chapters provide an overview, and each of the 14 remaining chapters takes the student through most of the common coding situations. Many examples and exercises are provided.


The author compared 188 cataloged works in music from the 1981 *British National Bibliography* with the same works cataloged by LC. For these works there were 322 LC subject headings and 449 PRECIS entries. Well over half of the documents had twice as many PRECIS entries as LCSH entries. In a qualitative analysis, the following differences were found. Each date in a PRECIS string is unique to that book. LCSH was designed for a one-step search. In long PRECIS entries terms of significance can be separated. PRECIS inadequately describes multitopical works, and LCSH inadequately describes multielemental works. PRECIS has greater potential for online catalog use, but it is not a better solution than LCSH if used in card catalogs.


To make recommendations for the indexing of the Champaign-Urbana Courier for the period 1894 to 1979, the author reviews the decisions which must be made prior to indexing. These are determination of scope, purpose of the index, cost, quality of reporting, definition of bibliographic unit, length of articles to be included, vocabulary control problems, edition to be indexed, pagination to be used, and qualifications of the indexers. The author reviews four newspaper indexing manuals and five microcomputer database software packages designed for indexing newspapers. She concludes with some guidelines and recommendations for the indexing of the Courier.


The indexing scene in West Germany is extremely diverse; 59 classification systems are in use, and there are 20 new codes for subject headings. In preparation for the introduction of a string input system in 1986, the Deutsche Bibliothek investigated PRECIS. No major difficulties were found in applying the indexing grammar in German. There were some criticisms of PRECIS, and a simplified version was recommended. The study found that PRECIS indexing was neither especially difficult nor time-consuming.


This study examined 600 journal articles in taxation, genetic psychology, and Shakespearian drama and applied PRECIS input strings to each one. For the preparation of the strings, "title-like phrases" of the items were used rather than the original titles. Fourteen problems are presented, such as repetition, specificity, and interaction. For each problem, a suitable example, a probable input string, and discussion are given. If PRECIS strings are to be applied to
periodical articles and to be made more universal, the authors make four recommendations and state that much more research is needed.


Six hundred abstracts in the fields of taxation, genetic psychology, and Shakespearian drama were recorded; and PRECIS input strings were applied to each item. This paper attempted to measure the efficiency of role operators through frequency of appearance in the strings. Altogether 4,180 concepts were specified. Of the three types of operators in PRECIS (main line, interposed, and differencing), main-line operators were used most in taxation and genetic psychology; interposed operators were used most in Shakespearian drama. This latter finding points toward the relative efficiency of this category in the humanities. The most-used operator in the study was the concept denoting part/property. More research is needed dealing with different disciplines.

Rodríguez, Robert D. “Kaiser’s Systematic Indexing,” LRTS 28:163-74 (Apr./June 1984). Rodríguez surveys the elements of Julius Kaiser’s scheme for systematic indexing, which, though neglected, should be of both historical and practical interest. Although there was much criticism of his system, Kaiser maintained that his indexing would be easier to construct and easier to use, especially in the fields of business, science, and technology.

Schneillng, Heiner. “Pattern Indexing: An Attempt at Combining Standardized and Free Indexing,” International Classification 11, no. 3:128-32 (1984). The author points out the difficulties of using standard subject headings lists such as LCSH, and believes that there is an advantage of the German rules to do without standard subject headings. He recommends instead the development of certain patterns of subject headings to be complemented by free indexing terms, using Shakespeare as an example.

Taylor, Audrey. “But I Have Promises to Keep—PRECIS, an Alternative for Subject Access,” TSQ 2, no. 1/2:75-90 (Fall/Winter 1984). The author’s research using PRECIS to improve subject access to school library materials began in 1972. Several examples are given on the application of PRECIS strings. Research conducted under the aegis of the York Region Board of Education indicated that limited subject access was a major cause of user dissatisfaction with the library catalog. Research funds were used to set up several experiments in the schools using PRECIS. The subject catalog now reflects curriculum content and concepts. Surveys showed that 75% of the students preferred PRECIS to traditional subject cataloging. PRECIS is used for analytical indexing and for providing subject access to fiction. In this project the first computer-produced, one-stage subject catalog was developed.


The author’s second bibliography of indexing and abstracting literature covers the period 1977-81. New items total 1,426; there are 220 items belonging to the earlier volume. Entries are arranged topically in two parts, one part devoted to indexing and the other to abstracting. A new feature is the inclusion of items in nonbook form. In each section items are arranged in chronological order and within each year alphabetically by author. In these bibliographies indexing is defined to mean only verbal indexing. The bibliography contains items in 26 languages. There are several author indexes (including Cyrillic, Arabic, Hebrew, and Chinese-Japanese), a title index, and a subject index.

The author compares the second volume of his international bibliography with the first. The number of items for this five-year period increased by 79% over the previous five-year period, with Russian and Japanese items showing the highest increase. The 1977-81 contributions came from 1,671 named sources. The overwhelming majority of authors published only once. Journal articles constituted two-thirds of all publications. Eight journals constitute the core journals yielding more than a third of all articles. New topics included artificial intelligence, databases, freelancing, and microcomputers.


To compare the effectiveness of PRECIS and LCSH, two sets of urban studies monographs were assembled for which the PRECIS indexing and LCSH subject cataloging were available. Some advantages of PRECIS are that it provides more access points, it has a more precise and up-to-date vocabulary, and it includes a time facet. Even though it has a weak syntactic structure and some vocabulary problems, "PRECIS provides a more precise and accurate system of subject access than LCSH as the latter is currently constituted." Neither system deals well with multi-tiered works, and the author suggests "some kind of abstract or summary along with subject headings."

SUBJECT HEADINGS


This reprint of the Fall/Winter 1984 issue of Technical Services Quarterly includes these critiques of subject heading practice: "Beyond the Pale: Subject Access to Judaica," "Out of the Kitchen—But Not into the Catalog," " 'Teen' Subject Headings: A Selection from the Hennepin County Library Authority File," "Tools for Tinkering," which lists sources additional to LCSH helpful in "making materials accessible by topic," and "Two Changed Headings: Documentation," which records the author's campaign to have the subject heading for Leprosy changed to Hansen's Disease and the heading for Sheltered workshops changed to Work centers.


Research is being conducted on the computer system at Teesside Polytechnic Library to determine whether supplying more information after a "near miss" would be feasible to enhance subject access. The study is not complete and various factors limit the results, but it has been determined by analyzing the search logs that many patrons find the "help" or conversational screens useful. Other approaches being used in different systems in the U.K. were examined and literature in the field was considered.


Soon expanded subject access will be available through online public access catalogs (OPACS) even to an untrained user. Although users expect little from a traditional subject search in a card or microfilm catalog, in an online catalog they do expect improved subject access through additional access points, subject term trees, search delimiters, and keywords. Library of Congress headings are considered inadequate; not enough headings are supplied. In some online systems classification numbers are available as access points, but this fails to satisfy the demand for access to the contents of the book. However "any OPAC is better than the card catalogue, if only because it eliminates moving from drawer to drawer."

An anthology which provides 33 discussions on subject analysis begins with Charles A. Cutter and comes up to more modern writers. The primary emphasis is on theory in the broad sense, which includes vocabulary structuring (classifications, subject headings lists, and thesauri) and subject indexing. Many of these contributions were published in books or journals no longer in print; this compilation provides a valuable service to teachers, students, and practicing librarians.


At the Center for the Study of New Religious Movements in America special subject access was necessary because of the many areas covered and the physical arrangement of materials in the library. This collection included “religious and quasi-religious movements that are not part of the mainstream Judeo-Christian tradition” and other related organizations. Criteria which were established are discussed and a valuable subject heading list used for this research collection is included.


Billed as “American Libraries first continuing education course,” this series of six articles was designed to help librarians understand the new implications of subject access. The first article defines and explains subject access from different points of view and includes a valuable list of terms and notes on the online environment (15:80–83). Lesson two compares the features of the older and newer ways of subject access (15:145–48, 150). Lesson three discusses LCSH and MARC formats with comments from ten guest lecturers (15:250–52, 254–55). Responses from four more guest lecturers with replies from three staff members from LC are presented in lesson four (15:336–39). A table summarizes “Suggestions to the Library of Congress for Improved Subject Access” and it is noted that many system design changes are not within LC’s power and some suggested changes have already been instituted. Lesson five covers the impact of technological developments on subject access with comments from six people who view the issues from different angles (15:438–41, 443). The series concludes by discussing what subject access is all about: the user (15:527–29).


This collection of the author’s works written between 1961 and 1984 includes unpublished and conference papers and is organized by the five questions she was asked many times: Where are we going in the redesign of catalogs and indexes? What do we know about users and catalogs? What can we do to improve subject access? Will classification have a use online? and What can be learned from subject access research?


The books covered in this survey were for Piaget’s second stage of moral development or about 4 to 7 years. Headings from LC’s Subject Headings for Children’s Literature were compared to those used in Bowker’s A to Zoo: Subject Access to Children’s Picture Books by Carolyn W. Lima. A chart shows the headings used in each list for the 27 books chosen because each included “at least one young human character who grapples with a problem, or character trait.” Some librari-
ans may wish to order books about “nice” characters only; however an understanding of how young children develop will show that these books on character development will be helpful to many young patrons and parents. Recommendations for subject heading practice are presented.


The Bulletin of the Center for Children’s Books assigns “developmental values” to the books it reviews. These were compared with the subject headings from the LC Subject Headings for Children’s Literature for the same 50 children’s fiction books. Two tables (“Relationships” and “Adjustment to Circumstance/Values”) show the terms used from each list and the number of times used. Several recommendations are offered to improve use of developmental values including: use ample scope notes, consult the Hennepin County Library Cumulative Authority List for ideas, and “assign ‘intercultural relations’ headings for positive as well as problematic relationships.”


The author is developing a Classaurus, which he defines as “a faceted hierarchical scheme of terms with vocabulary control features.” He discusses subject indexing languages and the Postulate Based Permutated Subject Indexing Language (POPSI) on which the Classaurus is based. It is a vocabulary control tool that uses both features of classification schemes and thesauri. There are charts and lists which illustrate the Construction of Classaurus and the Presentation of Classaurus as well as Online Classaurus.


Even though librarians theoretically provide catalogs for the convenience of the patrons, in the case of health information this seems to be untrue. In answering several questions on a survey, patients demonstrated that they would have difficulty discovering the library subject heading for medical topics. A chart comparing the patients’ answers, Sears headings, and MeSH headings showed that the patient needing information on cirrhosis would have to look under Alcohol—Physiological Effect in a library using Sears, and under Liver Cirrhosis in a library using MeSH. “It seems a bit arrogant to require the patron to come up to the artificial level of erudition imposed by our technically correct tools.”


This manual is a practical aid in dealing with some of the complexities of an increasingly complex and rapidly changing technical services environment. It is not a self-help book for the beginning cataloger, but must be used with other handbooks on descriptive and subject cataloging. Only subject headings that represent common problems for legal materials are included and there is no discussion of classification. Current LC practices were determined by analyzing rule interpretations, examining cataloging records, and by submitting questions to the Descriptive Cataloging Policy Office.


(See annotation under Classification.)

In order to become a documentalist, to analyze and describe the contents of a document, training is needed in subject analysis. Of the three relevant areas (special subject knowledge, demands of some documentation centers, and documentation methodology and its theoretical fundamentals), the author surmises that only the last can be "sufficiently" taught, and lists eight teaching objectives that will provide the needed abilities to the students. Elements of teaching subjects are shown in a graphic display and teaching methods are suggested.


The author believes that the online catalog has provided new opportunities and demanded better subject access. He discusses the criticisms of the most used system, LCSH, and notes that some improvements may be provided by keyword searching, left and right truncation and more bilingual materials.


(See annotation under Classification.)


MEDLINE, a database of biomedical periodical literature, is searched by Medical Subject Headings (MeSH). Thorough explanations of the maintenance of the subject headings are given under the topics of Indications for file maintenance; Class maintenance actions; File maintenance of other authoritative information attached to the heading; Class maintenance of subject hierarchies; Class maintenance actions file; Class maintenance failures; Checking class maintenance; Informing end-users of changes that affect retrieval; and Defining file maintenance policy.


A study of methods of instruction was conducted at the graduate library school of the University of Rhode Island using "Principles of the Sears List of Subject Headings." Three test conditions were used to determine whether the conventional method of using the printed text is significantly different from using a videotaped television lecture or microcomputer programmed instruction. The pilot instrument was submitted to professional librarians for evaluation and efforts were made to ensure that the content of each mode of instruction was the same. Results showed that microcomputer programmed instruction was superior to videotaped television lecture and to printed text for instruction but none of the methods showed a significant difference in retention.


Despite attempts of technical service librarians to expedite bibliographic standardization for a worldwide community of publishers and scholars, one of the remaining problem areas is subject control. Since LC headings are our closest approximation to a national standard, catalogers attempt to keep up with the changes but find it difficult. Some changes are the same as the descriptive cata-
logging changes in the establishment of names. Three other areas of difficulty are in the use of indirect subdivision, in the arrangement of geographical substructures, and in the movement toward more specificity.


Articles is in French, abstract in English. The paper on which this article is based was distributed for presentation at the 51st IFLA General Conference and was in English. The author surveys subject indexing in France from the 1950s to today. There is now a renewed interest in developing a common system because of automation and networks. A new study committee, of the French Standards Association (AFNOR), was established in 1983 to revise the 1957 standards for alphabetic subject cataloging and to set out rules for the structure and use of subject authority lists. The author explains the different applications of the two standards. Although one regrets the existence of two different systems in France, subject indexing has recovered some vitality today.


Deutsche Bibliothek installed the first computer for the purpose of producing a national bibliography in 1966. Today these aids are available: the subject heading reference pool (cumulated every six months), the subject heading pool (list of standardized subject headings), and Biblio-Data (an online information database with updated title and subject headings lists, and access assistance such as keyword lists). More than 110 institutions use Biblio-Data even though they are hindered by the numerous changes in the rules. The goal is cooperative subject cataloging and standardization in subject cataloging.


The errors identified in the topical and geographic subject heading fields of OCLC records were of five main types: inconsistencies in capitalization, punctuation and spacing; typographical errors; incorrect MARC tag or subfield code; invalid subdivision form; and invalid and unauthorized headings. Many inconsistencies which are relatively unimportant in card catalogs can become significant problems in a computerized system. The most efficient way to improve quality of the database seems to be by creation of an authority file for subjects used with automatic error correction to eliminate simple spelling and typographical errors. This improvement, of course, would not insure that the correct subject heading would be chosen.


For designers of online catalogs, the requirements of subject access are more complicated than those of access by author or title. The research project reported here found that those who search by subject are less happy with the search results but more satisfied with the online catalog than other searchers.


After issuing information to staff members on 3 × 5 cards, in memos and newsletters, the Subject Cataloging Division has now issued a voluminous man-
Although prepared for LC subject catalogers, it can assist other librarians, library school students and help libraries entering into cooperative projects with LC. Only the H section which deals with subject headings is in this incomplete edition. Publication of the new revised edition has recently been announced. Looking through the contents list one finds such helpful sections as Name headings as subjects, Geographic headings and subdivisions, and the helpful Free-floating subdivisions with the valuable section—Subdivisions controlled by pattern headings.


Likins warns that some of the subject headings offered for our use are "hilarious, outrageously offensive, or just plain mysterious"; but they may be accepted if librarians don't question what goes into the catalogs.


In September 1984 the Ohio State University Libraries applied the 1982 LC Subject Authorities File (SAF) to its online public access catalog (Library Control System, LCS). This article discusses the SAF, subject headings in OSU's catalog, applying the SAF, subdivisions, and how to handle outdated data. One of the benefits was the global change that could be made when an LCS heading matched a see reference; another is that information on reference links, scope notes, and suggested call number searches is now available to assist the catalog users.


Methods of enhancing bibliographic records are considered by asking: What are enriched records? What would enriched records provide? Should library catalogs provide access to parts of books? The last half of this paper discusses alternatives for book content indexing and provides a simple matrix of categories.


If there were no other way to tell that here is an important book in this field, one could examine the eight subject headings on the CIP card. Admittedly based on several research projects with much new material added, the chapter headings are: "Transition from Traditional to Online Catalogs," "Methods for Studying Library Catalog Use," "Implementation of Online Subject Searching," "Subject Access Points and Library Catalogs," "Importance of Subject Access in Online Catalogs," "Improving Subject Access to Online Catalogs," "Patrons' Experiences with Online Catalogs," and "The New Dimension of Online Catalog Use." Approving reviews abound; one critical view is available (Library Journal Mar. 15, 1985, p.46).


The author believes that there are three methods of providing subject access: cataloging, indexing, and classification, and that the new modes of retrieval will change the ways that we accomplish subject access. The five sections of the book are: "Introduction," "The File," "The Collection," "Terms," and "Summary"; each chapter has its own summary. It should be useful not only to cata-
logers and reference librarians, but also to retrieval specialists and designers of subject access systems. Ruth Carter, reviewing in the *Journal of Academic Librarianship* (Sept. 1985, p.233), said “This book is not all easy reading, but it is very substantive with no wasted words.”


A special subcommittee of the ALA/CCS Subject Analysis Committee suggested that microcomputer software should be cataloged much like other kinds of materials, especially nonbook materials.


The catalog for the Asian Model Library at Jefferson County Public Library in Colorado was developed to provide “non-discriminatory, equitable language access, with emphasis on subject access in particular” to the 4,000 items in the collection. Two problems were how to handle the nonroman scripts, and how to use mixed-language, online catalog records. A sample worksheet for Asian materials and sample multilingual cross-references are shown with suggestions for establishing multilingual subject authority files. It is noted that acquisition of Asian materials does not automatically make them accessible; however these suggested methodologies may not be suitable in other situations.


To prepare a critical examination of the use of CSH a questionnaire was sent to all Catholic college and university libraries; the response rate was 81.6%. The use of CSH has declined over the past thirty years because of more use of LCSH, use of OCLC, difficulty of using two lists, and the desire to simplify procedures. In the comparison to LCSH, 59.7% of the headings were the same but 40.3% were unique to CSH. He recommends that CSH be “systematically restructured as a thesaurus in which differences from LCSH are minimized.”


A survey was conducted to determine use of Catholic Subject Headings (CSH) in 248 Catholic college and university libraries. A good response showed that 37 use CSH now, 58 are former users of the list and 96 have never used it. The most common reasons to stop using this list are membership with an online bibliographic utility or the acceptance of LCSH. Almost never were the needs of the patrons mentioned as a factor in the decision to change and the author believes that specialized access to theological literature is being lost. He proposes restructing CSH as an information retrieval thesaurus with references to and from LCSH headings.


All headings in the most recent edition of Catholic Subject Headings and LCSH were compared to determine the extent of duplication, what differences exist and how many headings in CSH have no equivalents in LCSH. Differences were found because of form, specificity, and terminology; examples are discussed. A summary of the results is followed by specific recommendations for dealing with this problem.

The Vocabulary Switching System (VSS) is an experimental system which contains 15 indexing vocabularies from 12 different online database suppliers. By integrating these vocabularies into a common file the user has access to about 315,000 possible search terms. Each vocabulary is assigned to one or more of 4 modules: physical science, life science, social science, and business. Evaluations of the system were conducted at three separate sites. At the first site, user satisfaction was high, at the second, non-VSS searches came out slightly ahead, and at the third site VSS searches were slightly ahead. In another field evaluation, 65 participants took part in a survey; about 90% were of the opinion that VSS was easy to moderately easy to learn. Also available as an ERIC document, ED 247 948.


In classifying fiction, emotional experience and cognition/information are important categories to consider. Vocabulary control is another major problem in indexing fiction. Because a novel may satisfy a number of different searches, we need to provide access from many different perspectives, such as subject, information, emotion, and place. Progress in this field has been mostly theoretical so far, but certain objectives for fiction retrieval tools have been suggested. All kinds of requests by readers deserve attention and a systematic approach.


For the relatively new subfield of bibliometrics a survey was conducted to determine how quickly fifteen terms were listed in twelve major research sources. The time the term was first used in the literature was established as nearly as possible. The terms were from areas of activity, specific and nonspecific terms, and colloquial terms. The sources consulted are listed and the results of the searches in each are discussed. It is thought that such a study of terms to determine how quickly they are accepted can improve the efficiency of thesauri and retrieval tools.


In the past lists of subject headings or thesauri were tools for indexers rather than searchers. This paper states that online searching has brought different conditions which have created a need for "searching vocabularies" and lists four types for use by human searchers: enhanced thesauri and enhanced subject heading lists, synonym listings, index term listings, and merged vocabularies. Examples of each type are given and the merits and lacks of each are discussed.


The purpose of this study was to ascertain whether changes in LC subject headings for jazz and popular music are needed. A questionnaire was included in the Music Cataloging Bulletin, and 125 responses were received. The author surveys the development of LC subject headings for jazz and popular music from 1921 to today. The questionnaire responses brought to light some strengths and weaknesses of subject access to popular music; 48% indicated significant dissatisfaction with the headings, although 90% used them for music and sound recordings. The article includes a sampling of the comments re-
ceived, a list of subject headings for jazz and popular music, a copy of the questionnaires, and the tabulation of the results.


This subcommittee was created by the ALA/RTSD/CCS Subject Analysis Committee in 1981 to study the use of primitive and to suggest changes if necessary. An analysis of the LC headings which use this term is provided with the headings divided by pre-1940, post-1940, and MARC records. Its use in Dewey and LCC schedules is also analyzed. The final recommendations include eliminating this term, classing by geographical area rather than evaluative characteristics, and increasing awareness of improvements in language used to define preliterate people. An itemized list of recommendations for changes to LC classification schedules is included.


This analysis of subject headings as used in the WLN online system acknowledges that geographic terms are difficult for the cataloger to verify in some cases. In addition, the searcher often must know both the new form and the old form of the name to complete an effective search. The primary topics covered are Data Sources; Geographical Subject Headings Under AACR2; British City-Type Qualifiers; Inverted Headings (Lakes, Rivers, etc.); Online Subject Cataloging in WLN; "Indirect" Headings with Exceptions (primary examples given were Floods and Earthquakes); Change of Name; and a conclusion with suggestions for some new approaches.


To benefit scientific organizations in Poland and some international groups, the Thesaurus of Common Topics (TCT) is being developed. This article discusses its origin, aims and functions, scope and structure, relationships between terms appearing in it, and future plans for updating. The 1982 version is discussed in this article.


By presenting seven exhibits (lists of terms) the author demonstrates some of the reasons librarians may be confused when trying to establish subject headings for an information and retrieval program. There are several excellent human services taxonomies which may be used in conjunction with or instead of the usual library lists. Some suggestions are keep references to a minimum, add local information, expand subject headings as necessary. Some of these files may be available online soon.


_____; Rast, Elaine; and Felmlee, Cheryl. "Library of Congress Subject

Headings are listed under each country in two columns labeled “Existing LC headings” and “Proposed additions.” The additions are intended to be logical extensions of LC’s present practice and to suggest replacements or deletions that will bring the headings up-to-date.

“Why Not an ‘AACR’ for Subject Headings?” C&CQ 6, no.1:3-9 (Fall 1985).

Changes brought on by AACR1 and 2 have made the library community more aware of the need of a code for subject headings. Since LC has sole responsibility for the creation of the current list, problems of heavy workload and limited staff, along with technological changes, have prohibited the creation of a theoretical code. Some of the questions that would have to be addressed are Who would be responsible for production of the code? What should be the philosophy and form? What topics should be covered? Should it be a worldwide or an Anglo-American code? The practical advice available in the manuals being issued by LC could be the foundation.


This work presents a helpful combination of LC subject headings, DDC numbers, and LCC numbers. For example, by looking under the entry Classification—Books in the subject headings index, under 025.4 in the Dewey Index, and under Z696 in the LC Index one reaches information about the two other lists for the same topic. + +


A research study conducted in three public libraries in Virginia attempted to measure the extent to which users’ vocabulary matched the vocabularies of the LC subject headings in the card catalog. Data were collected over a period of 2 weeks in 2 different months from users who asked librarians for help. Of the 412 questions analyzed, almost 60% produced no match. PFS software was then used to develop a thesaurus bibliography on an Apple II microcomputer. Each subject record contained eight fields, including the vocabulary of the user and references to LC subjects, broader subjects, narrower subjects, related subjects, scope notes, and a bibliography of both books and journal articles.


This survey article begins with several definitions of subject access. The major portion of the text discusses problems with LC SH and problems with OPACs and provides suggested improvements for each. Although it is acknowledged that new technologies have brought new frontiers of information storage/retrieval and better access to information, “continuous exertions” are needed to insure that better service is provided. The thorough review article is followed by an extensive bibliography.


The three purposes of this study were to determine the extent of the problem of long subject files, to determine which elements on the catalog card are the most useful to the patron, and to show how these same elements may be used as
access points in a computerized catalog. The study was conducted at the Graduate Theological Union Library in Berkeley, California. The most important elements were title, date of issue, and language of title. The patrons ranked author recognition before previous knowledge of the work or publisher’s reputation as being helpful information.


Some of the aspects covered are the historical context of the subject access problem, the retrieval process, the indexing process, indexing languages, subject access in two online systems, and future considerations. A five-page list of references completes this very thorough essay.

**Thesauri**


The publication in 1980 of an *International Thesaurus of Cultural Development* by UNESCO encouraged “the production of regional thesauri as a channel for different regions and their component countries to express their cultural specificities . . .” This African thesaurus can facilitate the exchange and circulation of information among the different centers of documentation. The work is divided into seven groups of descriptors: culture, cultural development; culture and society; creation, communication, education; art, handicrafts; cultural industry, mass media; information, documentation; regions and countries. Parallel French text is provided throughout.


Eight thousand subject indexing terms from the following lists are arranged in alphabetical order: LCSH, Sears, *Readers’ Guide, New York Times Index*, PAIS, *Business Periodicals Index*, *Psychological Abstracts*, and ERIC. + +


This controlled vocabulary of financial industry terminology was developed in cooperation with the association’s online bibliographic database FINIS (Financial Industry Information Service). The approximately 1,100 words and phrases which reflect subjects in the current literature include “single word terms (Advertising), multiword terms (Certificates of Deposit), and well-known acronyms (EFTS).”


This current and comprehensive Spanish-English, English-Spanish bilingual subject heading thesaurus provides Spanish equivalents to the most current LC subject headings. It is the result of a seven-year project by the California Spanish Language Data Base (now the Hispanic Information Exchange) which updates and expands the Organization of American States’ *Lista de Encabezamientos de Materia* and Gloria Escamilla’s Universidad Nacional Autónoma de México list. Additions and changes are being published in quarterly supplements. A helpful section on “How to Use This Book” contains discussions of geographic names, personal names, and filing order.

Prepared for the patrons of the Patient Education Room of the Library at the Riverside Methodist Hospital, this listing could be of assistance to anyone wishing to provide medical information for the public. The author states that she included as many cross-references as she could think of. Under the broad heading Cancer there are listed 24 related topics for other materials. Classifications are printed under main topics with the suggestion to consult the card catalog for more information.


The terminology introduced in the new edition of the *Diagnostic and Statistical Manual* (DSM-III) of the American Psychiatric Association is compared to those from MeSH and the *Thesaurus of Psychological Index Terms*. Changes were in terms for some major diagnostic categories and in childhood psychiatric disorders. It would be necessary for librarians to be aware of the information available from each of these sources to be able to construct the most valuable search strategy. + +


This guide provides information needed for input and retrieval of records from the Management Contents Database. Examples are subject access to articles from more than 700 publications, locations of company names and addresses, or product names and evaluations, financial data on a company, and location of trade and industry news. The subject hierarchy lists about 4,500 terms with references, modifiers, and other special features. The dictionary not only defines the descriptors but lists journals and their codes.


The Cumulative Index to Nursing & Allied Health Literature serves online searchers as well as those who use and prepare the printed index. Some goals of the revision team were to keep the cross-reference structure, to expand to cover new subject areas, and to continue being alert to changes in terminology. Various basic subject lists were examined and the MeSH format was adopted. Steps in the revision included analysis of a tree structure, solving conflicts between headings in each system, and incorporating new terms such as Birth Centers. Some problem areas were handling of syndromes, indexing of organizations as subjects, and indexing of diseases. New topics were introduced including library literature of interest to health science librarians.


The list created for this special library can be helpful to anyone needing information on topics relating to gerontology or any of the terminology of aging. + +


Developed under the auspices of the Educational Resources Information Center of the National Institute of Education, U.S. Dept. of Education, this edition continues ERIC's efforts to maintain the quality of its controlled vocabulary while responding to the changing nature of education. It contains 9,076 vocabulary terms with 228 new descriptors and 231 new use references and includes scope notes and cross-references from previous editions.

This thesaurus is a structured list of controlled vocabulary terms used to index the material contained in the *Geomechanics Abstracts* database available on the Pergamon-InfoLine online database system. The subject headings are listed alphabetically with preferred terms in bold type. Broader, narrower, and related terms are indicated. Subject coverage includes the fields of rock and soil mechanics.


This specialized subject list includes only those subjects which would most likely be found in a church or synagogue library. A list of references provides sources for other headings. It is suggested that this be used in conjunction with *Classifying Church or Synagogue Library Materials*. Special tips are given on headings for names of persons, names of religious congregations and orders, names of sects and denominations, names of places, names of holidays and subdivisions. At the end of the subject heading list there is a small list of subject headings for children's books.


A 47-page subject headings list (using KWIK indexing) to five vertical file collections at the university is presented. The list is computerized and can be easily updated. Following the list are brief descriptions of the five vertical files.


This work will be useful to all who are interested in literature of or on Australian education. The introductory section gives a detailed description of the structure and format with numerous examples. The scope notes are of particular importance because they define the Australian connotations of the words. Librarians who have not always been sure that *footpath* and *sidewalk* are the same will be glad to have this clarification.


This controlled vocabulary for current nonbook materials, especially films and videocassettes, was prepared by consulting such sources as Sears, ERIC, Dewey, and the film catalogs of a number of Boards of Cooperative Educational Services of New York State. "The alphabetical display of terms has the most information for each term. A scope note is a brief statement of the intended usage of a term." The hierarchical display shows the broader-narrower relationships and serves as a quick guide to the thesaurus.


The workbook was prepared for users of the BLAISE-LINK online service. The preparation of an online search necessitates the use of subject headings, and the use of this workbook facilitates that task. Sections of the book discuss computerized subject headings and use of subject headings schemes as well as providing MeSH listings.

The *International Index to Television Periodicals* is designed for specialist institutions with a need for up-to-date information and is available in both book and microfiche form. This list of subject headings, prepared for use by its indexers, was compiled by Michael Moulds for the federation.


Prefatory material and indexes are provided in both English and French. This volume lists "terms referring to uniquely Canadian events, concepts, objects, etc., and an expansion of LCSH's Canadian historical and literary period subdivisions." Scope notes, for example, those under cities which give some historical information, seem especially helpful.


*POPLINE* (POPulation information onLINE) is a computerized database of abstracts on population and family planning in a variety of materials from journals to technical reports, from monographs to unpublished literature. This second edition updates and supersedes the 1981 edition with an expanded demographic vocabulary, a revised alphabetical section, a permuted display, and a hierarchical arrangement. The scope notes in the alphabetic display suggest broader, narrower, or related terms and sometimes furnish the MeSH heading. The permuted format is a rotated descriptor display arranged in a column so that each significant word falls in alphabetical order. Geographic rather than political country names have been used to facilitate searching.


The preface of this translation and adaptation of the 12th English edition of *Sears List of Subject Headings* states that it fills a need not covered by other lists which are for bigger or specialized libraries. Including all terms from the original edition caused some problems because many terms just do not have a Spanish equivalent (such as *Baby Sitters* and *Stress*). DDC numbers from the 11th abridged edition are included as is an index from English to Spanish for some difficult-to-translate terms.


This thesaurus provides more than 85,000 subject headings. Included are those used for *Books in Print*, *Children's Books in Print*, *Forthcoming Books*, *Paperbound Books in Print*, Ulrich's *International Periodicals Directory*, and *American Men and Women of Science*. In each list, the subject headings are followed by brackets containing the searchable numeric code for that heading in the online database available in BRS and Dialog. The preface includes information on how to use the codes in searching.


The newest edition of this thesaurus includes more than 400 new terms with such up-to-date ones as *Expectant Fathers* and such old standbys as *Taxation*. The rotated alphabetical terms section lists the terms in alphabetical order by each word contained within them. There are about 400 new scope notes added to the 1,300 from the 3d edition. The content classification scheme divides the field of psychology into 16 major categories and 64 subcategories which can be helpful in searching both in-print sources or in a database.

This thesaurus provides "an international list of descriptors for the indexing and retrieval of documents and data in the field of education." Developed for use in the databases of the International Bureau of Education (IBE), it is similar to the ERIC system and the EUDISED project but does not involve any existing scheme of classification. It gives more terms from the policy/administration/organization sectors than it does for the research/learning/instruction sectors. The descriptors are divided into seven fields: context, administration and research, teaching, people, growing and learning, content, things. In the English version each descriptor in the alphabetical listing is followed by its French and Spanish equivalents.


The National Library of Medicine in Bethesda, Maryland, produces both MeSH and CHEMLINE. They can be used to locate terminology for indexing and searching MEDLINE, TOXLINE, RTECS, TDB, CANCERLIT, and other databases. MeSH provides descriptors, qualifiers, and chemical terminology for controlled vocabulary and free text searching; CHEMLINE lists chemical terminology for free text searching and structural data for searching chemical structures.


Prepared by agreement with the Council of Europe and the Commission of the European Communities the thesaurus consists of nine monolingual volumes: Danish, Dutch, English, French, German, Greek, Italian, Portuguese, and Spanish. The purpose is to give European educational systems a common dimension for exchanging information. The structured alphabetic thesaurus is followed by a list of "terminographs" which relate the terms to specific educational fields and a rotated alphabetical thesaurus.


Founded in 1914 to index library material in the field of public affairs and public policy published throughout the world, the *PAIS Bulletin* is for English language materials only. This subject heading list is an access tool to the printed PAIS indexes as well as the PAIS databases and is divided into two parts: main headings and subheadings. The types of headings that can be combined and the types omitted are discussed. It is interesting to note that the subdivision *Work Load* is authorized to be used under only one heading—*College Teachers* and that *Work with Youth* may be used under *Libraries, Police, or Social Service*. 
A Two-Year Perspective on Library Preservation: An Annotated Bibliography

Lisa L. Fox

THE FIELD OF LIBRARY PRESERVATION grew and matured substantially during 1984 and 1985. The intent in compiling this bibliography is to cite the significant publications, to reflect historical development, and to trace the germination of ideas and programs in library preservation.

The literature of these two years includes many new publications that contribute to our understanding of the nature and preservation of library materials. At the same time, it indicates many areas in which scientific research and testing are being conducted, others in which standards are being developed, and still others in which the need for study is being articulated.

While the efforts to develop new treatments and strategies continue, there is a renewed emphasis on the importance of library binding as a preservation measure. Librarians and binders worked closely together to develop a new Library Binding Institute standard, and in this process, both came to see new areas of potential cooperation. Consequently, many binders are beginning to offer services formerly performed only in a library conservation workshop, and others are seeking to do so.

The emergence of preservation as a major library concern has led to the need for many more trained preservation administrators, and a number of organizations have sought to meet that need. At the national level, ALA/RTSD's Preservation of Library Materials Section conceived and conducted an innovative and ambitious three-part institute series to train library staff members at all levels—directors in a 1983 conference, middle managers in a conference held twice (1984 and 1985), and book repair technicians in a five-day institute in August 1985. PLMS also began working with the Association for Library and Information Science Education to develop ways of increasing the preservation awareness and expertise of library educators. Other nationwide professional organizations and regional and state groups also answered this need with a growing number and diversity of educational programs in preservation.

Lisa L. Fox is Preservation Program Coordinator, Southeastern Library Network (SOLINET).
The publications in this two-year period reveal a dramatic increase in activities designed to develop coordinated mechanisms for preserving the nation's documentary heritage. This increase may be partially a result of new information that reveals the scope of deterioration in library collections. Condition surveys have been conducted and results published. In particular, the survey at Yale University confirmed the profession's worst fears, indicating that one out of three volumes in research collections may be too brittle to use, and eight out of ten may be acidic and destined to embrittle. Such facts have made it clear that no single library has the time, personnel, or money to save all its materials. As a consequence of this awareness, much activity and many publications in 1984 and 1985 address the need to share and coordinate preservation strategies, and several propose mechanisms by which to identify materials of high priority, establish a decision-making rationale to ensure their preservation, and minimize duplication of efforts. Even with this coordination, some reports suggest, it may not be possible to save much more than 5 percent of the materials printed since the mid-nineteenth century. Such realizations have stimulated more energetic efforts to develop a nationally coherent preservation strategy, and the literature reveals how it is being implemented at the local, state, regional, and national levels. The energy that has been devoted to these concerns is indicated in the many citations on preservation program planning and implementation.

As a first step in the emerging national strategy, the profession has sought to improve the efficiency of local programs by providing resources to support local planning and implementation. The profession has energetically recorded its work by writing case studies and historical accounts of program development, by publishing planning reports and policy statements, and by articulating and sharing procedures and guidelines. These materials will streamline the planning and implementation process for libraries just beginning preservation programs. Further, this process of "codification" suggests the increased maturity of the field; no longer must each institution "invent the wheel," for there are now many proven models and strategies.

For there to be successful solutions to the preservation problem, there must be not only efficient local development, but also an effective strategy of shared responsibilities. In 1984 and 1985, cooperative programs have proliferated to provide information, training, and other services, and to coordinate preservation activities. Statewide programs have been implemented—most notably in New York—and many of these have secured legislative funding by arguing successfully that preservation of a state's resources is a fundamental responsibility. At the regional level, programs have been established in the mid-Atlantic states, the Midwest, and the Southeast to offer broad-based activities and solutions.

Nationwide initiatives have been undertaken with the revitalization and expansion of the Library of Congress National Preservation Program Office, the establishment of vigorous programs at the National Archives and the National Library of Medicine, the leadership of the Council on Library Resources in an intensive effort of national preser-
Preservation planning, and the creation of the Office of Preservation within the National Endowment for the Humanities. Finally, a new development in this period is the growth of preservation programs abroad and, concurrently, a burgeoning of international cooperation; illustrative of this development is the IFLA Core Programme in Preservation and Conservation introduced in April 1986 and based in LC's National Preservation Program Office.

The field of preservation is moving forward rapidly in a great many areas as the profession seeks simultaneously to raise the consciousness of librarians and the public, to provide better education and training, to stimulate the development of programs at all levels, and to define this still-embryonic field. What is emerging from all these efforts is a national preservation strategy—highly decentralized, but based on an acceptance of tiers of responsibility and on a shared commitment to preserving "the nation's collection."

This bibliography was prepared to reflect the content and development of the preservation field by providing works of interest not only to preservation administrators, but also to other professionals concerned with the longevity of their collections. It excludes highly technical works, book reviews, and publications in non-English languages. Reports on meetings and conferences are included if they offer useful information or indicate a significant movement in the field. Publications on preservation microfilming, and on the use of disk technologies as preservation media are included in the "References" accompanying the review by Swora and Fischer in this issue. As the exchange of letters between Pamela Darling and Michael McColgin indicates, it is still necessary to specify one's definitions in this field. The annotations in this bibliography follow Darling's usage: preservation is used to include all those activities that prolong the life of library materials or their content; conservation refers exclusively to the physical treatment of individual items.

Much was accomplished in the field of library preservation during 1984 and 1985. It is hoped that this bibliography will provide access to useful resources for the increasing number of librarians seeking to plan and implement preservation programs.

I. GENERAL WORKS AND LITERATURE GUIDES


The director of the new NEH Office of Preservation summarizes the cause and extent of the preservation problem, and outlines NEH's past and current efforts to support solutions.


Lists publications from LC, Smithsonian Institution, Dept. of Agriculture, National Bureau of Standards, and UNESCO.


In response to McColgin (see below), Darling offers a well-reasoned rationale
Takes exception to Darling’s definitions of conservation and preservation (cited in CAN no. 19 [Oct. 1984]). Notes the importance of developing a standard professional lexicon.

Using results of a 1980–81 survey, suggests trends to the year 2001. The survey and analysis have not been given much credence in library circles, especially since they were drawn when the field was in an early stage of development.

One of the more significant articles written in the field this year. Outlines the primary challenges for preservation in the following areas: the preservation administrator’s professional role; training opportunities; cooperative preservation microfilming projects; publishing on alkaline paper; quality in and informed use of commercial library binding services; environmental conditions and building designs; a national research and testing program; and public advocacy and support.

Survey of major activities, grants, programs, publications, and trends.

Seventeen papers address the history and importance of preservation, offer varied administrative models, discuss organization in relation to institutional priorities and available options, and confront the fiscal realities. Excellent introductory text for planners.

Realistically evaluates the impact of poor-quality books on libraries’ long-term preservation problems and budgets.

Long-awaited successor to National Preservation Report. Highlights cooperative preservation efforts within the U.S. and internationally, and reports on preservation activities at LC.

Observes that some librarians and archivists seem to believe that emerging technologies (especially optical disk) will solve all preservation problems. Gently argues against that view, and presents reasons for applying currently available and proven preservation technologies—especially microfilming.

See also: VI.B. Murray, “Bibliography”; VIII. Chickering.
II. SELECTED REPORTS OF ASSOCIATION ACTIVITIES

II.A. AMERICAN LIBRARY ASSOCIATION

Includes a thorough summary of information and actions from preservation meetings at the ALA conference in January 1985 (with several items that have seldom been announced elsewhere), and insightful comments on the role, successes, and difficulties of the section. See also: *RTSD Newsletter* 10, no. 2:5-11 (1985); *CAN* no. 22:13 (July 1985), and *CAN* no. 21:15 (Apr. 1985).

Summarizes PLMS meetings during the ALA conference, announces forthcoming ALA/PLMS publications, and includes news that NISO is considering development of a national standard for publishers’ bindings. See also: *RTSD Newsletter* 10, no. 6:61-66 (1985); and *CAN* no. 23:12,21 (Oct. 1985).


See also: V. Milevski; Montori; “Stanford”; Swartzburg; VI.C. “ALA on Theft.”

II.B. ASSOCIATION OF RESEARCH LIBRARIES


Stipulates levels of effort that should be achieved by ARL members in the following areas: adoption of a local preservation program statement; compilation, maintenance, and reporting of statistics; participation in national programs to film or otherwise copy materials for preservation; maintenance of acceptable environmental conditions; and budgetary effort (as percentages of acquisitions or of overall budget). See also: *WLB* 58:471 (Mar. 1984).

Describes a pilot survey of ARL libraries to determine the extent of their 1984-85 preservation activity. Questionnaire will gather individual and aggregate information about preservation activity; analysis will determine which statistics are relevant and identifiable. Conducted as one part of the implementation of the *Guidelines* (see above).

Announces development of plans for a joint project to convert records of monographs in LC’s file of the *National Register of Microform Masters* to machine-readable bibliographic records.

II.C. Research Libraries Group


Explains special problems of preserving music scores, and outlines procedures used in RLG libraries to ensure preservation of at least one copy of individual titles.


Microfiche listing of some 40,000 citations for microform master negatives and printing masters, plus citations for items "queued" for filming in the RLG Cooperative Preservation Microfilming Project. Includes about twice as many citations as did the first edition (June 1984).


Describes a survey of preservation selection procedures and criteria being used by RLG libraries to determine decision-making procedures and to formulate guidelines for cooperative preservation selection. Reveals more willingness to cooperate in preservation than in acquisition, indicating that—for preservation purposes—access is seen as more important than ownership. Illustrative of the trend to seek ways of coordinating and sharing responsibility.

III. Commercial Library Binding


Summary of papers on relationships between conservation and library binding services, including the possibility of binders' providing selected conservation treatment services; outlines steps that should be taken and areas to address if binders are to assume such responsibilities. Indicative of increasing interest in an expanded role for library binders.


Discusses the purpose of rounding and backing in library binding and offers tentative guidelines. Notes, however, that—though the subject has been hotly debated—no concrete research and testing have been done on the topic. (See also: Rebsamen, below).


Regularly reports on activities of the Library Binding Institute. Several issues include status reports on the development of a new LBI standard and explain there will no longer be a single "standard," but specifications among which the librarian and/or binder will need to choose. The eighth edition of the LBI standard was subsequently published in early 1986.


Offers many specific suggestions on developing an effective binding contract. Includes comments on responsibility of the preservation officer and the binder, and detailed discussion of contract provisions.


Discusses binding techniques and options for music materials. Offers useful
guidelines for decision making, based on applications and limitations of each technique.

Urges library binders to reconsider their roles in the preservation of library materials. Suggests changes in current practice, and outlines potential new directions.

Thoughtful analysis of the librarian-binder relationship. Analyzes their different "cultures" and the constraints and philosophies in each, and suggests some steps to improve relationships.

Outlines a procedure for binding an encapsulated book, and explains advantages (especially cost savings and efficiency) of Class A over post-binding for such books.

Includes information from 18 research libraries on organization, operations, staffing, standards and guidelines, and automation in library binding programs.

Outlines a rational decision-making strategy for choosing the appropriate leaf attachment method, and identifies advantages and limitations of each method. Suggests how decision making can be shared between librarians and binders. Follow-up appears in the Aug. 1985 issue (4, no. 4:16).

"Getting Educated: A Librarian's View," New Library Scene 3, no. 3:1,6,13 (June 1984).
Urges librarians to become better educated about and more actively involved in commercial library binding; suggests resources and strategies for doing so.

Update from his article in the October 1983 New Library Scene.

Practical advice for beginners.

Summarizes several useful points made during an ALA preconference (June 1983) on library binding.

Contrasts some characteristics of these two buckrams, and points to the need for further testing.

In each issue, this column addresses a technical aspect of library binding;

"University of Texas Hosts LBI Fall Technology Workshop," New Library Scene 4, no. 6:6-7 (Dec. 1985).
Reports on a workshop conducted for LBI members which included lectures on conservation materials, tools, book styles and structure, with demonstrations of treatment procedures. Indicative of the growing interest of library binders in conservation services.

Discusses provisions that should be in a library binding contract. Stresses the importance of the librarian/binder relationship.

See also: II.A. "PLMS in Chicago"; IV. "The County Atlas Project."

IV. CONSERVATION TREATMENT AND REPAIR PROCEDURES

Explains the role of a conservator, lists information sources, and briefly explains how to select and work with a conservator.

Summarizes discussions at the American Institute for Conservation of Historic and Artistic Works meeting regarding revision of its "Code of Ethics and Standards of Practice." Of interest to those who perform or contract for conservation services.

Several useful tips, and a treatment decision-making scheme, for a collection with numerous preservation problems: living mold and insects, rodent damage, heavy surface dirt, nitrate film, pressure-sensitive tape, and acidic storage materials.

Describes conservation treatment of 1,600 county atlases from LC by a library bindery. Illustrative of the trend to use commercial services when possible, allowing in-house staff to concentrate on unique projects.

Summarizes two research projects that found potassium lactate and potassium citrate (widely used in leather dressing) ineffective and maybe damaging; warns against using neat's-foot oil.

Includes instructions for 4 book wrapper designs requiring less time and expense than the LC "phase box." Discussion of design factors will help others


Explains the role of the Book and Paper Group and announces a project to develop a written catalog of paper conservation treatments, intended to codify current knowledge and identify areas needing research.


Provides specifications and suggestions for building (or adapting) a workstation suitable for routine repairs of nonartifactual materials. Practical and especially useful ideas for institutions with limited budgets.


Many techniques have been updated, new technology and information are included, and several new sections are added. Useful for conservators, and for others interested in understanding the craft and art of binding.


One of the more practical repair manuals yet produced. Explains book structure and causes of problems; then offers clear, detailed, and well-illustrated procedures (with estimates of materials costs and time requirements) for simple repair of hardbacks and adhesive bindings. Useful lists of supplies and suppliers. Printed on card stock paper and spiralbound, to make it durable and easy to use in a repair unit. Reprinted (with no textual revision but fewer illustrations) in *Illinois Libraries* 67:648-84 (Oct. 1985).


Outlines preservation criteria for exhibits; focuses on preparation of documents and on environmental controls.


Notes a project at the Canadian Conservation Institute to evaluate the “archival” tapes now used widely in libraries and archives for repair; the research is focusing on their stability and permanence with age.


Used in their workshops on mending and repair; draws heavily on procedures and illustrative materials from other sources.

Leaflet no. 9 outlines considerations of condition, security, and environmental control; no. 10 suggests sound and simple methods for safely exhibiting books, documents, and photographs.

Discusses how to assess a book repair manual, reviews several recently published manuals, and offers some caveats about relying on repair manuals for training.

Tigelaar, Mary. Simple Conservation Techniques. Richardson, Tex.: Association for Higher Education of North Texas (P.O. Box 830688, Richardson, TX 75083), 1984. Slide/tapes and manuals.
A series of 8 slide/tape programs, each with accompanying manual, on basic skills, paper repair, leather treatment, protective enclosures, simple binding, print cleaning, and display cradles. Designed for training in treatment of non-rare materials; best used to supplement on-site instruction.

Offers a rationale and guidelines for assessing value, projected use, and usability of materials needing treatment; suggests a quantitative approach, and acknowledges its need of refinement.

See also:III. Jones; X.B., LaRue.

V. EDUCATION AND TRAINING:
REPORTS AND RESOURCES

Describes a workshop to train local library staff.

Describes the rationale, content, and results of a 2-day disaster workshop.

Describes projects winning the 1984 Dana awards for public relations, including a user education effort at Cornell on the effects of food and drink in the library.

Report on an emergency preparedness seminar. Mentions a firm working on preservation and salvage of magnetic media.

Demonstrates, in a lively and humorous way, the importance of careful shelving and handling by staff and patrons.

Attractively presented general discussion of the proper techniques in handling, shelving, using, and photocopying books, and of damage caused by improper treatment. Useful for staff and user orientation.

Follow-up activities to the British Columbia Provincial Museum seminar. Proceedings are to be published, and a survey has indicated interest in establishing a more formal mechanism to coordinate and distribute emergency preparedness information for Canadian repositories. Conference report was provided by Toby Murray, CAN no. 20:16-18 (Jan. 1985).


Describes ways to increase preservation awareness of staff members, patrons, and other constituents. Full of sample materials used in ARL libraries, such as copies of policy statements, bookmarks, brochures, outlines for staff orientation programs, and articles and newsletters to garner financial support for local preservation programs.


Article and photo illustrate an exhibit used to raise patron awareness of the adverse effects of food and drink in libraries.


Reports on a 5-day training institute (in August 1985) on care and repair techniques, sponsored by ALA/RTSD and the LC National Preservation Program Office; likely to serve as a model for other intensive training programs.


Describes an intensive graduate-level course in library and archival conservation, emphasizing the role of administration.


Brief report on the weeklong ALA/LC institute, "Library Preservation: Fundamental Techniques," a unique educational program in book repair and one likely to be adapted by others for presentation at the state and regional levels. Announces that videotapes from the sessions will be produced as training aids.


Reports on a program at the annual conference of the Association for Library and Information Science Education (in Jan. 1985), which focused on the need to integrate preservation into all areas of library school curricula.

See also: IV. Tigelaar; VII. "Mellon Grant."

VI. EMERGENCIES, DISASTERS, AND SECURITY

VI.A. INCIDENT REPORTS


"Disaster Planning 'Incentive,'" MCCP Newsletter no. 8:2 (Apr. 1985).
Brief account of an incident at Ohio State University, in which a burst radiator sprayed some 2,400 books with hot, dirty water.


Note on a branch library fire started in a bookdrop.


Describes the procedures used to treat a large-scale mold outbreak in an off-site storage facility of the Denver Public Library. Offers considerable detail about fogging the collection with ortho-phenol-phenol, and suggestions for preventing or responding to similar outbreaks.


Weinstein, Frances Ruth. "A Psocid by Any Other Name ... (Is Still a Pest)," Library & Archival Security 6, no. 1:57-63 (Spring 1984).

VI.B. PLANNING AND PREPAREDNESS

A significant contribution to the literature. It is a national plan, both detailed and broad in scope. Includes sections on prevention, insurance, and recovery, with appendixes on professional services and building design, a model plan, and a bibliography. (Cited from Ellen McCrady, Abbey Newsletter 9:87-88 [Sept. 1985].) For background, see: CAN no. 19:13 (Oct. 1984).

One of the most practical and comprehensive manuals published on disaster prevention, planning, and recovery.
Reports on development of a building design by Caspe that incorporates ball bearings to allow a structure to move flexibly during earthquake tremors.

Announces formation of the Central U.S. Earthquake Consortium for a cooperative earthquake planning effort in 7 states under the aegis of the Federal Emergency Management Agency.

Mostly repeats information from his Managing the Library Risk.

Excellent guide; contains concise explanations and procedures, with instructions on local planning.

Comprehensive, unannotated bibliography; more than 90 books and reports, 150 articles (including incident reports), and 13 bibliographies.

Revised to include new information on technology for fire detection and extinguishing systems; discusses test results on efficacy of compact storage. Approved by ANSI.

Essentially a "fill-in-the-blanks" disaster plan, with some basic information on emergency procedures, computer emergencies, safety equipment, resources, personnel, and insurance; provides space for an institution to fill in local information. Well organized, but some sections lack detail; should be used in conjunction with other guides.

"O-DRAT, a Disaster!" CAN no. 19:19 (Oct. 1984).
Announces formation of the Oklahoma Disaster Recovery Assistance Team.

Useful information and suggestions, and a bibliography.

Useful introductory level overview.

See also: V. Baker; McKnight; X.A. Strassberg; XI. B. Smith, "The Use."

VI. C. SECURITY

The ALA Rare Books and Manuscripts Section Security Committee plans to develop an information packet on book theft legislation, prevention, and response.
Summarizes areas commonly overlooked in security policies and procedures; lists components to consider in needs assessment.

Offers a rationale and specific guidance for establishing and implementing security procedures. Four papers discuss security options, preparation of a security plan, use of staff for security, and legal matters (including insurance).

Results of an informal survey of collection security policies. Urges increased attention to theft problems.

Details of a theft at the Univ. of California-Berkeley, with recommendations on collection security.

Includes some useful security procedures on book theft and vandalism as well as security of people and buildings.

Offers background information, outlines practical steps, and identifies minimal to extensive implementation alternatives.

Summary of security, including legal issues and general recommendations.

The introduction notes the importance of detailed security policies and procedures, and observes that too little attention is paid to prevention of theft. Includes policy statements, procedural documents, and task force reports from ARL libraries.

**VII. GRANTS**

Especially significant project because of its use of scholars to determine preservation priorities.

Describes a grant to the Hill Monastic Manuscript Library in Minnesota to microfilm a British manuscript collection.

Announces a 3-year grant from the Mellon Foundation to support internships in preservation administration and preservation science.
See also: X.B. Lowell; "New York State"; "Newsnotes"; Quigley; X.C. Council; X.D. Field.

**VIII. PRESERVATION OF NONBOOK MATERIALS**


Information on selecting photographic enclosures, including advantages and disadvantages of each, and financial considerations.


More than 100 unannotated citations on preservation of photographic, film, magnetic, and sound media.


Outlines factors to consider in selecting storage enclosures (both paper and plastics) for photographs. Recommends paper as the most affordable, provided several criteria are met.


Additional information (see McCrady, "Albumen," below) suggests that alkaline buffering may not speed deterioration of photographic materials.


Comprehensive guide on photographic preservation and conservation. Thorough, well organized, and clear.


Succinct, useful tips on preservation and storage techniques.


Detailed review of preservation strategies for prints and film. Presumes some background knowledge; some recommendations subject to debate.


Describes a process used at the Belfer Audio Laboratory and Archive at Syracuse University to play fragile audio cylinders using laser technology to avoid wear and tear.


Describes a library’s use of photofiche for preservation of and access to a heavily used photographic collection. Describes decision-making factors and production steps; assesses results.


Reports that research indicates albumen prints should be stored at 30-40% relative humidity and that contact with alkaline storage materials may hasten deterioration. See follow-up in "Does Alkaline . . . ?" above.

A Two-Year Perspective

Gives the history of the "microfilm measles" scare of the 1960s and its connection with Barrow's research on permanence of paper. (Cited in *Abbey Newsletter* 9:102 [Nov. 1985].)


Report of a meeting of the Photographic Materials Group of the American Institute for Conservation of Historic and Artistic Works; includes several useful suggestions on photograph albums, duplication of negatives, and storage enclosures. Additional information on the papers is available in *Lecture Abstracts from the Fifth Annual Winter Meeting* (from D. H. Norris, 106 Danforth Rd., Wilmington, DE 19810).


Meeting report includes useful suggestions on preservation of motion pictures, sound recordings, still prints, magnetic tapes and disks and optical disks.


Describes an efficient photocopying procedure used at LC to transfer information from old to new negative jackets (and old to new shelflist cards).


Announces opening of the Photographic Preservation Laboratory at Rochester Institute of Technology to perform research and provide education.


Discusses nature of photographic materials, causes of deterioration, environmental controls, and storage. A useful introduction.


May be the most useful and practical guide available for libraries and archives. Focuses on systems to organize, access, and preserve entire collections rather than on individual items. Addresses all aspects of managing photographic collections, from appraisal and accession through research and publication. Preservation discussed in one chapter, but pervades entire book.


Explains how to treat videocassettes damaged by water and mold. Outlines proper environmental conditions, duplication of damaged cassettes, and procedures for mold removal.


Discusses the causes of rust on microfilm, and outlines treatment procedure.


Describes maintenance procedures, environmental conditions, and policy
development for phonodiscs, magnetic recordings, wax cylinders, and compact disks. Includes a basic bibliography.


Concludes that electrostatic copiers produce minimal, if any, density changes. Offers cautionary guidelines pending further research.


Written for architects, this pamphlet offers guidelines on retention and preservation of architectural records.


Addresses the special problems and procedures related to maps. Offers suggestions for organizing and funding a map preservation project, and cites sources of expertise and materials.


General outline of proper care, handling, and storage of 20th-century photographs and negatives.


General (sometimes simplistic) overview of storage, environment, security, and circulation factors.


While arguing for intershelving book and nonbook media for patron convenience, the author offers guidelines on safe storage and handling procedures for nonbook materials.

See also: II.C. Cardell; IX. DeCandido; X.A. Koch and Irwin; X.C. Frangakis.

IX. PAPER, ENVIRONMENTAL CONDITIONS, AND COLLECTION SURVEYS


Establishes the criteria for permanence of uncoated paper, covering specifications for pH, alkaline reserve, and freedom from groundwood. Based on work of the CLR Committee on Production Guidelines for Book Longevity (published by CLR in 1982).


Describes the state-of-the-art building design and environmental control system in the Newberry Library's new bookstacks.
DeCandido, Robert. "Out of the Question" column, CAN no. 22:10,24 (July 1985).
Discusses (1) photographic storage materials made of polyvinyl chloride and (2) causes and prevention of "foxing."

Detailed, fairly technical account of the destructive action of acids in paper.

Preliminary results of a survey of the condition of books at LC, with interesting speculation on the embrittlement process.

Preliminary report on a small-scale survey of incoming books at Columbia University. Found that 40% of new books used acid-free paper (i.e., pH over 6.7) and 25% were on alkaline paper; reports surprisingly high use of alkaline paper by commercial presses.

Based on the environmental standards adopted by the National Institute for the Conservation of Cultural Property, the draft outlines recommended levels of temperature, relative humidity, air quality, and illumination for paper-based documents. The standard distinguishes between circulating and preservation collections. Many questions have been raised regarding the adequacy of research and testing upon which the proposals are based.

Humorous piece that illustrates the difficulty of finding sources of permanent/durable paper in retail amounts; includes some practical ideas on how to do so.

Reports on a statistical study of LC’s General and Law Collections conducted in early 1984, results of which were used in legislative advocacy for the construction of LC’s book deacidification facility.


Presents the methodology, findings, and recommendations of an environmental conditions survey in a community college.

The long-awaited report of Yale’s extensive survey (more than 36,000 volumes) offers a comprehensive picture of the physical composition and condition of a large research collection. Found 37.1% of the books to be brittle and 82.6% to be acidic (and destined to embrittle). Conclusions useful for other planners.
X. PRESERVATION PROGRAMS: CASE STUDIES, PLANNING, AND IMPLEMENTATION

X.A. LOCAL PROGRAMS


Reports on the results of an extensive collection condition survey and presents a comprehensive plan for preservation of National Archives holdings. Useful for libraries, especially because of its statistical findings regarding paper stability and the instability of certain photoreproduction processes, and as a conceptual model for identifying preservation alternatives. For a summary of the planning process and recommendations, see: Calmes, Alan "Preservation Administration at the National Archives and Records Service," *CAN* no. 19:4-5 (Oct. 1984).


Background information, practical suggestions, and procedures for preservation planning and implementation in a small library that has no full-time preservation officer, limited funds, and no formal training in preservation.


Presents documents from 15 research libraries with active preservation programs, including historical accounts of program development, organizational charts, and position descriptions. Introduction highlights organizational trends. Contains many materials useful for program planners.


Approved by the university in 1981 as the basis for launching a formal preservation program. Based on a yearlong self-study, it includes background information on preservation issues, statements of policies and practices, and 215 detailed recommendations in virtually every area of preservation. An excellent planning model.


Findings and recommendations of a preservation self-study conducted with OMS assistance. Recommendations focus on preservation decision making, physical treatment, and organization.


Findings and recommendations of a preservation self-study conducted with OMS assistance. Recommendations focus on preservation education and disaster preparedness.


Based on a review of past emergencies and damage in the Cornell University Libraries; recommends several features to incorporate in library design and renovation, including building sites and physical plans; interior environment; fire detection, alarm, and extinguishing systems; security; and emergency equipment.


A practical consideration of stack cleaning.


Presents findings on physical condition of the collections (excluding rare books) and recommends treatment (with priority rankings and cost estimates). Describes the criteria, methodology, and results of the condition survey; offers a systematic, three-phase approach to treatment; and outlines in detail a program for ongoing collection maintenance. A useful model.


Suggests steps that small libraries can take with little expense. Focuses on
equipment and supplies for repair; tends to neglect consideration of needs assessment and many important nonrepair activities.


See also: I. Merrill-Oldham and Smith; IV. Williams.

X.B. STATE PROGRAMS


Reports on legislation empowering Arizona's Dept. of Library, Archives and Public Records to set enforceable preservation standards for repositories. Summarizes the provisions of "Standards for Permanent Records Media and Storage," which set storage requirements for paper and microfilms and include standards for storage containers and environmental specifications.


One of the more detailed articles on the New York Preservation/Conservation Program. Includes text of the enabling legislation and useful information on funding criteria.


Announces the formation of a task force to prepare a five-year conservation and preservation plan (1986-90) for Illinois libraries.


Explains the rationale and purposes of a model "Conservation Work Station" established by the Illinois Cooperative Conservation Program at the Lincoln Library in Springfield. Innovative approach, in that the work station is available for use at no charge to trained staff from any Illinois library.


Examines current preservation efforts and statewide preservation needs in New Jersey and proposes an action plan to address those needs. Recommends development of criteria for collection significance and priorities; adoption of a coordination role by the New Jersey State Library; funding advocacy; and identification of technical resources. By late 1985, a bill had been signed to authorize and fund a state program, and strides toward implementation of some program components had been made; see Abbey Newsletter 9:102 (Nov. 1985). See also New Jersey Libraries no. 18:2-4 (Spring 1985).


New Jersey Libraries 18 (Spring 1985).

Reflecting the increased attention to preservation in New Jersey, this issue of the state library association newsletter is devoted to preservation. Articles on the state planning program, the conservation services of the Northeast Document Conservation Center, and profiles of several local programs.
Describes New York state legislation authorizing regular funding for preservation, explains the allocation of funds, and outlines goals of the New York Conservation and Preservation Program. Also announced in *RTSD Newsletter* 9, no. 8:97 (1984).

Information on a cooperative preservation effort in the Minneapolis area through Metronet, and on the Archival Conservation Center (Cincinnati).


Describes the new Conservation of Historical Materials Grants Program of the New Jersey Historical Commission.


Profiles the office from its establishment in September 1983; describes the program's goals and activities.

X.C. REGIONAL PROGRAMS

Announces creation of a Preservation Committee by AMIGOS Bibliographic Council (library network serving the Southwest) to assess regional needs, consider establishment of a preservation program, and explore cooperation with other networks.

Includes information on the $1.5 million grant to CLR from the Exxon Educational Foundation, which supported creation of the Mid-Atlantic States Cooperative Preservation Service and a national preservation planning effort, and on activities to promote wider understanding of the preservation problem. The Exxon grant is also summarized in *CAN* no. 19:22 (Oct. 1984).

Announces plans in progress to establish a cooperative preservation program by the regional library network in the Southeast. The program was later redefined and subsequently funded. See *CAN* no. 19:23 (Oct. 1984).

Includes substantive remarks (by Margaret Child and Ann Russell) on regional cooperation, and some tips on preserving photographs and maps.

Announces preservation planning through Metronet among librarians in the St. Paul area, and an NEH grant to SOLINET to establish a regional preservation program. Suggests the viability of supporting preservation through existing cooperative organizations.
Announces the establishment and purposes of the service. See also *American Libraries* 16:823 (Dec. 1985).

Reflects the two-year history of the program from its beginnings through the end of the grant funding in December 1985. Includes news about its services, as well as about other preservation programs, technical information, publications, and services and products. The issue for Dec. 1985 summarizes accomplishments, announces termination of the program, and outlines services that will continue through the Illinois Cooperative Conservation Program.

Announces plans for an NEH-funded, invitational conference of 13 state and regional preservation programs directors to share information and explore lateral cooperation. Significant meeting, as it attempted to establish coordination among regional programs and to articulate positions on the emerging national preservation strategy. A follow-up report, including the conference statement, was published in *National Preservation News* no. 3 (Jan. 1986).

Announces an NEH grant to establish the Midwest Cooperative Conservation Program and renewal of LSCA funding for the Illinois Cooperative Conservation Program, both based at Southern Illinois University.


**X.D. National Preservation Programs and Planning Strategies**


Outlines the committee's progress in considering the nature of the preservation problem, assessing present activity, and identifying needs and solutions. Report focuses on the "brittle book" problem; deems preservation microfilming the most reliable technique for information preservation. Conclusions are offered in the areas of access, funding, collaboration, technology, and public understanding.

Reviews the history of national planning for the preservation of library materials in the U.S. Argues that a centralized program would have been ineffective, and applauds the successes achieved through informally structured nationwide efforts.

Field, Jeffrey. "The Role of the National Endowment for the Humanities' Of-

Outlines activities the office expects to support. After citing estimates of the embrittlement problem and the cost of solutions, stresses the importance of coordination. Describes the NEH effort as a component of a national strategy, and summarizes others. See also "NEH Announces Office of Preservation," *National Preservation News* no. 1:4 (July 1985).


Includes reports on significant preservation activities at LC such as the Optical Disk Pilot Program, the Mass Book Deacidification Facility, and major projects in restoration and preservation microfilming.


The result of an in-depth study of preservation needs and capabilities in state archives, this document presents findings and recommendations leading toward a coordinated nationwide preservation program among government archives. The report is to be finalized in early 1986. Funding for the project was announced in *CAN* no. 21:15 (Apr. 1985).


Reviews CLR's preservation activities, focusing on the work of the Preservation and Access Committee.


Announces that the office is fully staffed and intensifying its program efforts; outlines its role within LC and describes the program's activities. Also discussed in *National Preservation News* no. 1:1-3 (July 1985).


Outlines steps taken by the National Library of Medicine in planning a coordinated nationwide program among biomedical libraries.


In this interview, the Deputy Librarian of Congress discusses the importance of LC's preservation work, especially the deacidification and optical disk projects.


Eloquently articulates the need and prerequisites for a coherent national strategy for retrospective and prospective preservation. Suggests these implementation steps: organize the effort, establish a funding plan, strengthen and/or create (as needed) regional conservation and reformatting facilities; strengthen and develop (as needed) research efforts; and build public understanding and support.

Provides status report on the program and explains the multistage process of identification, bibliographic control and preservation.


See also: I. Cannon; Merrill-Oldham; National Preservation News; X.A. Calmes; X.C. Council; "NEDCC."

X.E. International Programs


Announces that the Canadian Conservation Institute’s Mobile Conservation Lab Programme will be discontinued after its 1986 activities. See further details in Abbey Newsletter 9:111 (Dec. 1985).


Reports on preservation-related meetings at IFLA (in Aug. 1985), and mentions establishment of an IFLA Core Programme in Preservation and Conservation, to be based at LC. Also mentioned in American Libraries 16:617 (Oct. 1985).


Announces creation of a Preservation Service in the British Library.


Announces establishment and goals of the British Library’s National Preservation Office, created largely as a result of the Ratcliffe report.


Assesses the preservation policies and practices of libraries in the U.K., sources of training, and available conservation facilities; and outlines a cogent strategy for addressing the problem locally and cooperatively. Essentially outlines a national preservation plan for Britain. (Subsequent developments are covered in "Preserv/conserv/ation," above, and in "Response of the British Library," below).


Expressions agreement with the Ratcliffe report and pledges to work with the library community to define the proper role of the British Library. Offers to assume responsibility for national coordination as a first step. Summarized in Abbey Newsletter 9:53 (May 1985).


Outlines plans for a major invitational conference to focus on the importance of and strategies for preservation, to be sponsored jointly by the Conference of
Directors of National Libraries, IFLA, and UNESCO. Plans call for the IFLA core program on preservation to be introduced at the conference.

See also: VI.B. Anderson and McIntyre.

XI. RESEARCH AND TECHNOLOGY


Brief description of a project that will use NASA space photography to investigate and assess deterioration that is invisible to human or microscopic detection.


Discusses the results of accelerated aging tests in materials enclosed (through encapsulation or deacidification), and suggests how deterioration might be further slowed.


Announces filing of a patent for a chemical procedure to strengthen brittle paper during deacidification. Potentially a major development, but little has been published yet.


Reports on a mass deacidification process being developed by the Koppers Company, two paper-strengthening processes under development, the use of low-level gamma radiation for disinfestation (see items in XI.B.) and investigations on shrink-wrapping books (see items in XI.D).

See also: IV. Ogden; VIII. "RIT Laboratory."

XI.A. DEACIDIFICATION


Discusses the National Library's use of the Wei T'o mass deacidification system. Gives helpful information on the application of the technique, what it does and does not do well, and some figures on cost and productivity. Apparently the first evaluative article on the system written by a user, this is a useful and important addition to the literature.


Explains LC's diethyl zinc (DEZ) deacidification process, why it is needed, and anticipated results. Includes artist's renderings of the planned facility at Fort Detrick. Status reports on the DEZ project are included in the following:


Reports that the Ohio Cooperative Conservation Office is developing plans to obtain funding for a mass deacidification facility to serve Ohio libraries.

Outlines objectives of a mass deacidification process, describes the Wei T’o system in Canada (including process, costs, and productivity), and compares it with LC’s DEZ process in the same terms. Also includes brief discussion of paper strengthening and fumigation. This article was followed by Peter G. Sparks and Richard D. Smith, "“Deacidification Dialogue,”” *College & Research Libraries News* 46:9-11 (Jan. 1985), in which Sparks explains why DEZ is preferable for LC’s purposes, and Smith reiterates remarks in his earlier article. Smith has presented similar remarks in: "“Mass Deacidification Cost Comparisons,”" *College & Research Libraries News* 46:122-23 (Mar. 1985); and in "“Reader Forum,”" *American Libraries* 16:86 (Feb. 1985); the latter was in response to Plotnik (X.D., above).


Offers a general explanation of deacidification, and describes three large-scale processes, noting the benefits and disadvantages of each: the Wei T’o system, the DEZ process, and a process under investigation by the Koppers Company. Contains much information not widely available before.


Summarizes remarks by Peter Sparks and Richard Smith about the LC and Wei T’o deacidification processes. Some of the editorial remarks and interpretations are subject to question. The same is true of "“Mass Deacidification and the Reinvention of Wheels,”" *Library Hotline* 13:6 (July 16, 1984).

See also: IX. "“Survey of Book Condition”"; XI. "“New Hope.”"

XI.B. FUMIGATION

Baker, Richard G. "“Monitoring the Effectiveness of Fumigation (Or, The Case of the Unknown Bloom),”" *Abbey Newsletter* 8:54 (July 1984).

Presents a simple method for testing mold to see if it is alive.


Expresses concern about chemical pesticides/fumigants, especially about the lack of adequate testing, and suggests a number of alternatives.

"“Ethylene Oxide Standard Published,”" *Abbey Newsletter* 8:72 (Oct. 1984).


Outlines reasons that ethylene oxide is not being used at the British Columbia Provincial Museum.


Explains gamma radiation sources and use in sterilization; cites further readings.


Reports that a group of ethylene oxide users has formed to address health and safety issues, effectiveness of ETO, its reaction with museum and library materials, and compliance with the OSHA standard.

Results of research (at the Czech State Archives) into the effect of gamma radiation on paper infected with mold. Found that the mold could be killed with little apparent effect on paper strength, but warn of possible delayed effects.


Discusses the investigation conducted to ensure benignity of the treatment, effectiveness, and other decision-making factors; describes the process, costs, and results. Concludes the treatment is warranted in cases of large-scale infestation for materials that have little artifactual value. Conclusions summarized in *Abbey Newsletter* 8:25 (Apr. 1984).


Detailed description of fumigation by blast freezing.


Analyzes the need for and alternatives to ethylene oxide fumigation. Argues that fungus and insect infestations can be avoided through environmental controls, and suggests the possibility of fumigation by deep freezing, use of carbon dioxide, vacuum drying, or high-pressure treatment.


Describes the technology used in the Wei T’o Book Dryer-Insect Exterminator, and outlines European uses of deep-freeze fumigation.

See also: VI.A. Turner.

XI.C. PHOTOCOPIERS


Summarizes ARL members' policies and practices in photocopy services; includes sample policy statements, service descriptions, position descriptions, user surveys, and information on pricing and contracts.


Brief note on an overhead photocopier under development at the British Library.


Reports that a prototype nondestructive photocopier has been developed through ALA's Library Technology Project. Explains how it works, offers cost estimates, and reports that the model will be field tested.


Announces that the U.S. company that was developing a face-up copier (described in White, below) has gone out of business, and describes two British face-up copiers available. See follow-up in *Abbey Newsletter* 9:77 (Sept. 1985).


Reports on the development of a face-up copier. Modified from a Sharp SF-
825 copier, it permits face-up copying without requiring that the book be opened more than 100 degrees. Gives then-current development status.

XI.D. VACUUM PACKAGING


Discusses the Kansas City Federal Archives and Records Center's use of shrink-wrap packaging of low-use bound volumes, especially those with "red rot." Lists benefits and acknowledges some potential problems.

XII. STANDARDS AND GUIDELINES


Detailed instructions on preparation of long-lasting copies of thesis materials.


Reports on an ISO standard for accelerated aging, a NISO standard being prepared on environmental conditions, adoption of the ANSI standard for permanent paper. Urges that the federal government (a major publisher) revise its paper specifications to require use of permanent paper.


Reports that a national conference (Apr. 1985) expressed a need for additional standards in preservation and conservation. Full conference report to be issued by NISO.

See also: I. Mosher; II.B. ARL Committee on Preservation; III. "Editorial License"; "Guide to Drafting"; IV. American Institute; "The B&PG"; VI.B. National Fire; IX. American National; National Information; X.B. "Arizona."
IN MEMORIAM:
JOSEPHINE S. PULSIFER, 1915—1986


Jo was born in Cumberland, Maine, and received an A.B. degree from Barnard College and a B.S. in Library Science from Drexel Institute of Technology. After service in a variety of library positions, she started her career at the Library of Congress in 1963 as a serials cataloger. However, in 1965 that career was interrupted with a period of service at Washington State Library from 1965 to 1971. The library community can be grateful for this occurrence because there Jo was introduced to MARC and library automation.

When the Library of Congress sent out invitations for participation in the MARC Pilot Project, the most enthusiastic answer was from Jo, representing the Washington State Library; and it was in this spirit she conducted her entire professional life. Washington State became a MARC Pilot participant and Jo, along with the staff from other MARC Pilot Project institutions and from the Library of Congress, gave many ALA MARC institutes to thousands of librarians from the East Coast and as far west as Hawaii. Jo also was involved in the initial design of the Washington State Library Network and its resource directory.

Jo returned to the Library of Congress in 1972, assigned first to the MARC Development Office and later to the Automation Planning and Liaison Office. Here, she continued with her career in library automation and her involvement included the development of MARC formats, the building of MARC databases for different forms of material, participation in the design of the in-process and Order Division automation projects, and the modification of LC’s online system to support AACR2. Additionally, she had overall responsibility for a detailed planning document for bibliographic processing for the Library of Congress.

Jo was an active member of RTSD and ISAD for many years. She had a great capacity for giving and was always willing to share with others her most important treasure—her time. So much of Jo’s living was her work. She was a true professional and her colleagues, friends, and family are all richer for having known her. —Henriette D. Avram.
Dear Editor:

From: Peter J. Paulson, Executive Director, Forest Press. [Abridged]—Thanks for publishing the Annual Report of the Decimal Classification Editorial Policy Committee in the January/March 1986 issue of LRTS. Since the time Margaret Cockshutt submitted the copy to you, Forest Press had decided not to publish DC&4:6. Copies of the full report, however, may be obtained on request from: Forest Press, 85 Watervliet Ave., Albany, NY 12206.

From: Jeffrey Earnest, Music Cataloger and Head of Catalog Maintenance, University Libraries, University of Arkansas. [Abridged]—C. Donald Cook’s article “Cataloguing in the International Arena,” (Jan./Mar. 1986) presents thought-provoking arguments for international cataloguing standards; however, some of Mr. Cook’s statements are disturbing in that they seem to ignore the realities of cataloging under the standards already in existence. It is true that “we need to continue to question seriously all local variations . . .” We must consider . . . how important “economic considerations” are and how powerful “resentment at being told what to do” can be when what we are told to do is illogical and needlessly work producing. The grief caused by certain provisions of AACR2 . . . will continue to have immense negative consequences for libraries. “The dilemma of standards versus cataloging tailored to local needs” will be with us considerably longer than it need have been had those responsible for catalog code revision been truly responsive to real library needs. “Local variation which can result from the growth in the use of microcomputers in cataloging” seems to be one of few ways that catalogers can fight against this impersonal, almost reckless lack of concern . . . I say more power to catalogers who can actually do something to make catalog information more usable to patrons. These variations are as often a response to unworkable standards as they are a desire to be independent.

Response from: C. Donald Cook, Professor, Faculty of Library and Information Science, University of Toronto. [Abridged]—Mr. Earnest and I appear to agree on what I had hoped was the major point of my paper: namely, that standards and

Editor’s note: Letters sent to the editor for publication in this column cannot be acknowledged, answered individually, or returned to the authors. Whenever space is available in an issue, selected letters will be published, with little or no editing, though abridgment may be required. Letters intended for publication should be typed double-spaced.
cooperation should benefit rather than obstruct useful cataloging... AACR2 was built from the input from hundreds of catalogers and was intended to provide both useable standards and considerable flexibility within these standards. If the provisions of the code are proving to be "illogical and needlessly work producing" and show an "impersonal, almost reckless lack of concern" for patrons, Mr. Earnest and those who agree with him might help to improve AACR2... by addressing their specific concerns and preferred alternatives to the editors... to the Joint Steering Committee... and to the Library of Congress, whose rule interpretations have, indeed, tended to make the application of AACR2 more inflexible (as well as clarifying intent in numerous instances). Constructive criticism in this vein would assist in creating the "user-driven" standards which I urged in my paper.

ALA PUBLISHING SERVICES ANNOUNCES DISTRIBUTION AGREEMENT WITH LIBRARY ASSOCIATION PUBLISHING


Under the terms of the agreement, ALA Publishing Services will become the exclusive U.S. distributor of Library Association titles on May 1, 1986. Oryx Press, which currently distributes Library Association titles, will accept orders for LA titles until May 1. Oryx will continue to fill backorders held by them after May 1. After May 1, orders for LA titles should be sent to ALA Publishing Services.
### INDEX TO ADVERTISERS

<table>
<thead>
<tr>
<th>Advertiser</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALANET</td>
<td>323</td>
</tr>
<tr>
<td>Ambassador Books</td>
<td>322</td>
</tr>
<tr>
<td>Baker &amp; Taylor</td>
<td>327</td>
</tr>
<tr>
<td>R. R. Bowker</td>
<td>2d cover</td>
</tr>
<tr>
<td>Cuadra</td>
<td>3d cover</td>
</tr>
<tr>
<td>EBSCO</td>
<td>328</td>
</tr>
<tr>
<td>Forest Press</td>
<td>323</td>
</tr>
<tr>
<td>Gale Research</td>
<td>4th cover</td>
</tr>
<tr>
<td>Haworth Press</td>
<td>325</td>
</tr>
<tr>
<td>Pergamon</td>
<td>178</td>
</tr>
<tr>
<td>K. G. Saur</td>
<td>177</td>
</tr>
<tr>
<td>University Products</td>
<td>323</td>
</tr>
<tr>
<td>H. W. Wilson</td>
<td>326</td>
</tr>
<tr>
<td>Yankee Book Peddler</td>
<td>324</td>
</tr>
</tbody>
</table>

---

**WHEN THE QUESTION IS SERVICE**

**THE ANSWER IS AMBASSADOR**

- Firm Orders
- Continuations
- Approval Plans
- Binding Services
- On-Line Ordering

"serving college and university libraries for over 12 years"

**AMBASSADOR BOOK SERVICE, INC.**

42 CHASNER STREET • HEMPSTEAD, NEW YORK 11550

**toll free** 800-431-8913

in New York call collect (516) 489-4011
DEWEY DEcimal CLASSIFICATION®

Numbers You Can Count On!

3 Vols. 1979
ISBN 0-910608-23-7 $120.00

Abridged Dewey Decimal Classification® and Relative Index.
Edition 11. 618 pp. 1979
ISBN 0-910608-22-9 $35.00

ISBN 0-910608-36-9 paper $10.00

ISBN 0-910608-32-6 paper $10.00

Melvil Dewey: The Man and the Classification. 210 pp. 1983
ISBN 0-910608-34-2 $11.00

The Eighteen Editions of the Dewey Decimal Classification®
678 pp. 1976
ISBN 0-910608-17-2 $11.00

FOREST PRESS
85 Watervliet Avenue • Albany, NY 12206 • U.S.A. • (518) 489-8549
An International Service to Libraries and Information Centers

ALIANET

electronic information service of the American Library Association

- electronic communications
  including mail, interactive forms, uploading/downloading, special libraries supplier services
- databases
  RDA AdvanceLine, UMI Article Clearinghouse, U/T TEXT,
  Electronic News and more
- professional information
  electronic newsletters, bulletin boards, conference schedules
- network support
  custom applications for networking needs

Contact Joel M. Lee, ALANET System Manager,
ALA Headquarters Library, 50 E. Huron St.,
Chicago, IL 60611 (312) 944-4580

IT'S HERE!

Our new 100 page catalog features over 150 new products for conser-
vation and preservation.

Send for your FREE copy today!

UNIVERSITY PRODUCTS, INC.
P.O. BOX 101 DEPARTMENT 1
HOLYOKE, MASS. 01041
Would you let a computer choose your clothes?

Of course not. And we wouldn't let a computer choose your books either. Yet, some vendors do just that . . .

With a Yankee Book Approval Plan, your collection is built through the book-by-book judgments of our bibliographers.

You receive the right books because they have been selected by our bibliographers . . . and not, as is the case with some vendors, by a computer. At Yankee Book, the computer is used to generate management reports, not make judgments.

To discuss your library's approval needs, call Gary Shirk, Vice President of Collection Management Services, TOLL FREE 1-800/258-3774.

Eastern Division:
Maple Street
Contoocook, NH 03229
1-800/258-3774 or 603/746-3102

Western Division:
3712 Commercial Street, N.E.
Albuquerque, NM 87107
1-800/654-2665 or 505/345-8163

Note: Innovacq and Geac users can now receive Approval Plan bibliographic data in machine readable format from Yankee Book.
Which Ones Would Your Library Like to Examine?

The Haworth Press, Inc. will be pleased to send you free samples of our journals that are relevant to your library's interests and needs. To request a sample, write to us on your library's letterhead. We think you'll like to examine more closely and the specific interests of your library.

PUBLIC LIBRARY QUARTERLY
Editor: Richard L. Wixars
"Substantial... nicely written... well written... highly recommended..."
Addresses the major challenges and opportunities that face the nation's public libraries. Stresses a meaningful balance between relating to medical reference services, and those prepared by authors, the journal provides stimulating ideas for the profession — always in a timely and responsible manner.
Volume 7, No. 1 — Spring 1988
Subscription rates:
Individuals: $22 / Institutions: $60 / Libraries: $85

THE REFERENCE LIBRARIAN
Editor: E. L. Persinger
"Contains one of the most scholarly articles of the quarter — a comprehensive analysis of the current state of the art of reference services"
Volume 8, No. 1 — Fall 1988
Subscription rates:
Individuals: $28 / Institutions: $60 / Libraries: $85

RESOURCE SHARING & INFORMATION NETWORKS
Editor: John L. Smith
"A fine spectrum of information sharing services..."
Volume 4, No. 1 — Fall 1986
Subscription rates:
Individuals: $22 / Institutions: $60 / Libraries: $85

MEDICAL REFERENCES SERVICES QUARTERLY
Editor: W. M. Wood
"Scholarly, timely, and well formatted... a fine addition to the field of medical information..."
Volume 5, No. 1 — Spring 1986
Subscription rates:
Individuals: $22 / Institutions: $60 / Libraries: $85

LIBRARY & ARCHIVAL SECURITY
Editor: Peter Galley
"Essential reading for those involved with library and archival preservation and conservation, as well as security programs. The volume has relevance to the security aspect of library and archival professions..."
Volume 8, No. 1 — Spring 1986
Subscription rates:
Individuals: $18 / Institutions: $72 / Libraries: $172

JOURNAL OF LIBRARY ADMINISTRATION
Editor: John R. Shaw, PhD
"Well edited and timely. The articles present unique options or insightful considerations of various facets of library management..."
College and Research Libraries
Held byLibrary journal until the other library programs that represent some aspects of the field...disciplinary and interdisciplinary
Volume 7, No. 1 — Spring 1986
Subscription rates:
Individuals: $28 / Institutions: $60 / Libraries: $85

LEGAL REFERENCES SERVICES QUARTERLY
Editor: Robert B. Bergin, JD, MLS
"Valuable and practical publication for every law librarian. Should be read by every social science librarian..."
Volume 6, No. 1 — Spring 1986
Subscription rates:
Individuals: $28 / Institutions: $60 / Libraries: $85

THE SERIALS LIBRARIAN
The international journal of serials management
Editor: Peter Galletly
"Highly recommended... a serious yet common sense forum for dealers, wholesalers, and manufacturers..."
Volume 11, No. 1 — Fall 1988
Subscription rates:
Individuals: $40 / Institutions: $80 / Libraries: $125

SPECIAL COLLECTIONS
Editor-in-Chief: Lisa Ahe
"An essential resource..."
Volume 4, No. 1 — Fall 1986
Subscription rates:
Individuals: $45 / Institutions: $90 / Libraries: $160

TECHNICAL SERVICES QUARTERLY
Editor: Peter Galley
"A unique, well-conceived, well-produced journal that fills a need in today's library..."
Volume 5, No. 1 — Fall 1986
Subscription rates:
Individuals: $145 / Institutions: $305 / Libraries: $610

CATALOGING & CLASSIFICATION QUARTERLY
Editor: Ruth C. Carter
"The leading journal in its field..."
Volume 7, No. 1 — Fall 1988
Subscription rates:
Individuals: $23 / Institutions: $65 / Libraries: $175

FREE SAMPLES OF IMPORTANT LIBRARIANSHIP JOURNALS

From The Haworth Press, Inc.
28 EAST 22 STREET, NEW YORK, N.Y. 10010-6194

The Haworth Press, Inc.
Anyone Can Use It, Everyone Can Afford It

Software For Inexpensive, Direct Patron Access

WILSEARCH, Wilson's new personal computer software package, opens the door to online searching for everyone—from high school students to research chemists. WILSEARCH formulates your search automatically, and provides instantaneous online retrieval from any of the 3,500 periodicals and 60,000 books indexed and cataloged annually in the Wilson databases.

**Formulates Your Search On An Easy-to-Use Electronic Screen**
- All of the instructions and suggestions you need to formulate and carry out your search appear on the screen, for each step of the search procedure.
- Overview and database descriptions explain what's available and how to access it.
- Menu of subject areas suggests databases you should search.
- Database menu lets you select any two databases to search.
- HELP window explains your options all through the search.
- Help command provides more detailed assistance.
- Automatically suggests additional related terms if appropriate when the search is complete.
- If no references are found, there is no charge.

**Meets the Special Needs of Librarians**
- Perfect as a ready-reference aid, WILSEARCH provides quick answers to basic reference queries. And, a special WILSEARCH feature allows direct access to WILSONLINE, the Wilson Company's online retrieval system, for users with WILSONLINE accounts. Other WILSEARCH benefits for librarians include:
  - Saves time spent on patron assistance.
  - Set-up feature regulates patron use.
  - Protects you against unauthorized copying of your diskettes.
  - Searches can be printed out on your PC printer.
  - Can be used with all IBM-compatible computers.

**Pay As Little As ONE DOLLAR Per Search!**
WILSEARCH is priced to meet the needs and budgets of libraries of all types and sizes. While you can use WILSEARCH on a pay-as-you-go basis, subscribers receive substantial price reductions—you can pay as little as one dollar per search. For details on pricing, call the toll-free number below.

**Try It—You'll Like It!**
The best way to find out how valuable WILSEARCH will be for your library is to try it yourself. Wilson is offering a special demonstration diskette that will allow you to conduct 20 searches at a total cost of only $20. If after using the diskette you decide to open a WILSEARCH account, the $20 will be deducted from your first year's licensing fee.

To request a brochure describing WILSEARCH in detail, including an order form, rate schedule, and information on the demonstration diskette, please call toll-free: 1-800-367-6770 (In New York State, call 1-800-462-6060, in Canada, call collect 1-212-588-8400).

**THE H.W. WILSON COMPANY**
950 University Avenue
Bronx, New York 10452
We've taken book ordering out of the Dark Ages.

BaTaSYSTEMS is Baker & Taylor's newest generation of electronic book ordering services. It's especially designed to work with existing computer hardware, with built-in flexibility that allows you to match the level of service to your library's unique needs. Whichever service level you choose, you'll save time, reduce paperwork and speed book acquisitions—all at a lower cost. For example:

ORDER allows you to order books through your personal computer using a modem and regular telephone lines. Just enter the ISBNs and the following day you'll receive electronic confirmation from which you can print order slips. All calls are toll free. You also save the cost and delay of postal delivery.

Or you can choose SEARCH AND ORDER. In addition to electronic ordering, this service gives you quick access to Baker & Taylor's diverse and comprehensive database of over 800,000 title records. It's your single-source for virtually all the titles published or distributed in the United States. And you eliminate manual searching and purchase order typing.

Finally, BaTaSYSTEMS ACQUISITIONS offers on-line access to our database and electronic ordering plus a complete software package with fund accounting and full reporting functions.

These advanced service technologies are typical of how Baker & Taylor stays in step with the times, building on our experience to bring you the latest in library services.

BaTaSYSTEMS. It's nothing less than a renaissance in book acquisitions.

Write or phone today for more information.
Since that particular day in March, 1876, when Mr. Bell used his new invention to call for his assistant, information management hasn't been the same.

Today's information manager is a communications specialist. And when you provide information on demand, you demand support from people who pursue excellence as avidly as Mr. Bell.

EBSCO, for its part, has explored the application of international telecommunications to the world of serials. And put people with experience at the other end of the line.

For contemporary subscription services that reach the highest levels of accomplishment, communicate with EBSCO.
GOOD IN-HOUSE DATABASE SOFTWARE IS KNOWN BY THE COMPANY IT KEEPS


If you need a multi-user online system for in-house database management and information retrieval, there's an easy way to decide what's worth looking at:

FOLLOW THE LEADERS...
You'll be in very good company with STAR®

CUADRA ASSOCIATES, INC.
2001 Wilshire Blvd., Suite 305
Santa Monica, CA 90403
Telex: 755814 CUADRA SNM
Telephone: (213) 829-9872

With sales representatives and demonstration facilities in Washington, D.C., New York, Montreal, Toronto, London, and Munich

*The listing of STAR users does not necessarily imply that the organizations or individual users within those organizations endorse STAR. If they use STAR, or if the system is used in every department, or if all organizations have access to copies of STAR, and if it is being used to support and maintain an in-house database and is a part of a complete electronic products and services.*
Access the vast knowledge available from America's nonprofit organizations

Part 1, Business, Finance, Industry Trade Publications
Part 2, Science, Medicine, and Technology Publications
Part 3, Social Sciences, Education Humanities Publication

Encyclopedia of Associations

First Edition. Edited by Denise Allard
Thomas, 18,000 entries in three softbound volumes. $60.00/part, $125.00/set (Part 1 read)

In-depth guide to trade and professional associations periodicals

This new reference tool allows you to tap current thinking on thousands of areas—from archaeology to nuclear issues. Serving the business, academic, and research communities, A.A.: Association Periodicals is a one-stop guide to the thousands of periodicals published by trade associations, professional societies, and other nonprofit organizations. As associations are taking on more and more of the research once conducted by government agencies, often these periodicals are the only source for vital information such as statistical compilations, technological and scientific research, and surveys.

Entries are arranged under specific subjects. Typical entries include:

- Publication title(s)
- Acronym
- Name of organization
- Address
- Telephone number
- Subject matter and special features
- Format

- Where indexed and abstracted
- Editor(s)
- Editorial and circulation addresses and phone numbers
- Year established
- Former title(s), if any
- Frequency
- Subscription price, availability, details
- ISSN
- Online availability, including cassette, tape, microfiche, etc.
- Advertising accepted

Title/Keyword and Publishing Organization Name/Acronym Indexes provide easy access to all periodicals described in the book.

For fast service—
Order tollfree: 800-223-GALE

Available on 60-day approval.
Send check with order and receive a 5% discount.
Place a Standing Order and receive an additional 5% discount.
Customers outside the U.S. and Canada add 10%.