

# LIBRARY RESOURCES & TECHNICAL SERVICES

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# Serials in 1978

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## *Introduction*

Nineteen seventy-eight seems to have been more a year of watching and waiting than a year of new programs, new products, or new ideas relating to serials. It was hard for a serials librarian to try to imagine what course the future might take, since the biggest events of the year involved the publication of new cataloging rules and the appearance of a plan for the development of a National Periodicals Center. In both cases there could be no immediate impact on any work that was underway but the knowledge that great changes were coming led to more questions than answers in the literature.

## *Acquisition*

To no one's surprise, the prices of serials rose again in 1978. Any serials librarians who took solace from the 1977 figures<sup>1</sup> and supposed that prices would continue to rise but at a slower pace were unpleasantly surprised. In a spurt that could only be characterized by Brown as "alarming" in presenting the annual *Library Journal* price indexes, the average subscription price of the journals examined reached \$27.58, an increase of \$2.99.<sup>2</sup> Prices for 1977 had increased only 9.2 percent but 1978 was a hefty 12.2 percent gain. Price increases since 1970 ranged from the 1977 low of 9.2 percent to the tremendous 22.4 percent of 1973, with the average resting at 13.8 percent. Brown's figures on prices for serial services (serials which abstract, index, or revise information in a specific field) show that the average cost rose 8.2 percent with the 1978 figure at \$153.95. From 1970 to 1978 increases ranged from 5.4 percent to 18 percent with the average for the nine years working out to 8.8 percent.

In Britain, Blackwell's Periodicals Division noted a dramatic reduction in the overall price increases for periodicals being purchased by British libraries.<sup>3</sup> Much of the slowing of the increases appeared to be due to the influence of the stronger pound on prices. British journals

showed a 16.3 percent increase, a single percentage point lower than last year. When prices of foreign periodicals for American libraries are considered, the true picture cannot be clearly determined without an analysis of the impact of the devalued American dollar in relationship to other currencies. However, Clasquin, in the survey he has done for *Library Journal* since 1974, reports that a limited sampling of foreign titles would indicate that they have undergone larger price increases than similar publications in this country.<sup>4</sup>

Although average subscription prices for periodicals of all types are useful in indicating general trends, when periodical prices are analyzed according to the subject disciplines covered by the publications it is quite apparent that the most inflationary increases occur in the scientific literature. Clasquin concluded that the average price increase for periodicals in science and technology in 1978 was generally twice the percentage of 1977.<sup>5</sup> It would appear, too, that in the scientific, as well as other subject fields, the journals that are the most expensive in the first place are often the very ones that increased in price and have registered price increases for earlier years also.<sup>6</sup>

In order to cope with the constant subscription price increases, libraries have had to devote larger and larger proportions of their purchasing budgets to serials just to maintain titles already in their collections. In some libraries funds are so tight that one standing order must be dropped to free the money for the purchase of a new title. As a result of these serious strictures, the library literature on serials in 1978 was replete with articles on investigations made in particular libraries in an attempt to determine what serial titles were truly needed and truly used in the collection and what titles could be safely dropped without significant impact on the amount of service the library was able to give to its users. Various methods were used in trying to evaluate use but the most popular method, in academic libraries at least, seemed to be to consider how often the journal was cited in theses written by students or papers published by faculty members. Pan found that the citation method appeared to be as reliable in predicting the use of journals as the judgment of usage made by experienced librarians familiar with the journals.<sup>7</sup> Satariano warned, however, that in certain subject areas it was dangerous to use citation alone as an indicator of use, as many of the popular types of periodicals were read by many faculty and students for general or background information but were rarely cited in papers.<sup>8</sup> Faculty members are often asked by academic librarians to rank periodicals in their own disciplines and decide which should be held by the library. Morton queried the faculty by using printouts of titles supplied by the library's subscription agent.<sup>9</sup> Any titles not selected were called to the attention of the faculty one last time, and those still not selected were cancelled. Goehlert points out, however, that faculty review of titles needs to be considered carefully and, usually, done in combination with some other kind of review, as faculty members often have personal sub-

scriptions to titles in their own fields so would not suggest those to the library even though the journals would, actually, be wanted or used by persons in other disciplines.<sup>10</sup>

In considering what standing orders might be cancelled, Heroux and Fleishauer assigned points to such factors as circulation, support of university programs, whether the publication was in a language taught at the university, whether the title would be available elsewhere on interlibrary loan, and whether the title was covered by one of the indexing services held by the library.<sup>11</sup> Interestingly enough, they included frequency as one of the factors to be considered, since they felt that the additional costs of check-in, binding, etc. of publications appearing more often should weigh against them. The circulation figures immediately identified the titles that had to be retained, but all of the other factors were needed to evaluate the remaining titles. Johnson and Trueswell,<sup>12</sup> Rodger,<sup>13</sup> and Bolgiano and King<sup>14</sup> all used a combination of types of data in making their cancellation decisions. Rodger, however, mentioned the high cost of the staff time taken to scrutinize the serials collection although she felt that by involving the faculty as well as staff in the decisions there was an increased awareness on the part of the academic staff of the value and the cost of the library.<sup>15</sup> Kriz raises the question of the usefulness of periodicals in the library as related to the usefulness of other materials (e.g., books).<sup>16</sup> Traditionally, libraries have responded to funding shortages by maintaining periodical subscriptions in preference to buying new books. However, it has been found that in certain subject fields (Kriz used engineering) a large number of subscriptions is less important than an adequate book collection because students and faculty must use, and will cite, information that is fundamental in the field and that would appear in books rather than journals. He feels that in academic libraries particularly the number of subscriptions held far exceeds the need because it has always been assumed that periodicals are the most important tool of research.

A survey of British libraries revealed that most changes in subscription (i.e., decisions to purchase, to cut, or to cancel particular periodicals) are related more to finance than to interlibrary loan (the thought of getting the material on loan rather than buying it).<sup>17</sup> About 85 percent of the libraries in the survey were forced, by lack of money, to trim their subscriptions, but they were able to offset this loss of information by the use of interlibrary loans. As a result of the availability of material through the British Library Lending Division, 80 percent of the libraries actually expanded their service to users. This survey, appearing at a time when we are still in the planning stages for our own projected National Periodicals Center, would seem to be a positive indication of the benefits to libraries of a central store from which periodicals or material from periodicals can be obtained.

What happened in 1978 in regard to the National Periodicals Center? In June several hundred people attending an American Library

Association (ALA) conference program heard some of the details of the development plan that was being prepared by a Council on Library Resources (CLR) project team.<sup>18</sup> The National Commission on Libraries and Information Science (NCLIS) had, in 1977, recommended that the Library of Congress (LC) assume responsibility for developing, managing, and operating the center. However LC asked CLR to work out a technical plan that could be used by LC or by any other agency prepared to become responsible for creating such a major facility for periodicals. In August the plan was published,<sup>19</sup> and the hope is that we may be somewhat closer to the goal of having a centralized collection of periodical literature that will be available to libraries throughout the country. Various hearings and meetings to consider some details of the plan have been scheduled in 1979. However, there is no clue at the present time as to which agency would be willing or, given the somewhat staggering costs projected in the plan, able to consider the actual formation of the center.

For serials librarians who still have money to spend or wish to use their funds as wisely as possible, two useful but infrequently updated works appeared in 1978: the fourth edition of ALA's *International Subscription Agents*<sup>20</sup> (third edition 1974) and the second edition of Gale Research Company's *National Directory of Newsletter and Reporting Services*<sup>21</sup> (first edition 1966), which lists lesser known but often useful serials. The preface of the latter work indicates that the work covers somewhat more than most librarians would expect to find under the umbrella of the term "newsletter."

#### *Bibliographic Control*

The second edition of the *Anglo-American Cataloguing Rules*<sup>22</sup> (AACR 2) was published on December 7, 1978. Although some serials librarians and others had had opportunities to see parts of the rules or to read about the rules in the many articles that have been written in the past few years, to actually have the volume in final form was an exhilarating experience. In almost all earlier discussions and papers it was impossible to understand or, at least, to keep in mind the relationship of one rule to another, but with text in hand many areas that had been imperfectly perceived became much clearer.

In using AACR 2, serials catalogers will be confronted with three major differences from serials cataloging as done under the first edition of AACR. First, there is no longer a special rule regarding the choice of main entry for serials. All materials (including serials) are cataloged according to the same rules for choice of entry. Since the rules severely limit the publications that may be entered under a corporate body and few serials will meet the criteria for entry under the name of a person, the net result should be many more serials entered under title than is presently the case. Second, serial entries will carry a statement of responsibility, where applicable, in the body of the entry. Third, serials will be described according to the first issue published

or the earliest issue in hand rather than from the latest issue available. Different information on later issues will be recorded in notes to the extent necessary or desirable. Taking the description from the first issue means that updating a serial record will no longer require that the elements in the body of the entry be disturbed or changed. There would seem to be a benefit in this rule for those engaged in any sort of cooperative cataloging of serials as the first issue of the serial will be the "benchmark" for the descriptive elements. Serials catalogers will not need to wonder, in trying to accept and update cataloging from another library, whether their own issues are earlier or later than those described, a most important question under present rules.

AACR 2 has special chapters relating to the description of various types of library materials. Although there is a chapter devoted to the description of serials (chapter 12), it must be used in connection with another appropriate chapter when the serial is a microform, sound recording, etc. "Since seriality is a condition that may apply to any type of library material,"<sup>23</sup> serials catalogers should, as time goes on, become proficient in the use of rules throughout the code.

It is not known, at present, how many libraries may plan to begin using AACR 2 in 1979. In response to a resolution passed by representatives of major library organizations at a meeting in Chicago in August sponsored by ALA, the Library of Congress announced that it would not adopt AACR 2 until January of 1981, instead of 1980 as originally planned.<sup>24</sup> As a consequence, LC will defer the closing of its card catalogs until 1981 also.

Although some information has appeared concerning ways of implementing AACR 2 and the Library of Congress has tried to keep other libraries informed, as early as possible, of decisions it has reached in regard to catalog closing, there has been little news specifically relating to the particular problems of continuing serials. Many serials now cataloged will still be issued after AACR 2 is adopted or after the date at which a library may choose to close its catalog. Would these serials be redone under the provisions of AACR 2?<sup>25</sup> If a serial entry must be updated because of changes on later issues, would the serial entry be moved from a closed catalog? And redone under AACR 2, or earlier rules? In the past when new cataloging rules were adopted, few libraries have had the resources to bring all former cataloging, serials included, into conformity. However, when implementation of new rules is combined with catalog closing, it does not seem logical or useful to have records for living serials residing in the closed catalog.

In 1978 the former ad hoc committee to study the progress of AACR 2 that had been formed by ALA's Serials Section was dissolved, and a new standing committee to study serial cataloging was constituted.<sup>26</sup> Attendance at meetings of the earlier committee had been extremely high in the past, and it was expected that serialists would want to continue to have the opportunity to share their cataloging prob-

lems. Although no formally structured arrangements have been made, it is expected that the new committee will be able, by some means, to see that the ideas or needs of serials catalogers are given consideration in any future revisions or official interpretations of AACR 2.

Under new regulations effective January 1979, the United States Postal Service (USPS) made it a requirement that publications with second-class mailing privileges carry an identifying number that would be, whenever it was available, the International Standard Serial Number (ISSN). The new regulation was a result of many conferences held between postal officials and staff of the Library of Congress.<sup>27</sup> A special project was undertaken by the National Serials Data Program (NSDP) at LC to assign new ISSN as needed and, through USPS, notify publishers of existing ISSN in advance of the effective date of the regulation. NSDP will, on a regular basis, assign ISSN to publications making new applications for mailing privileges or publications reapplying because their titles have changed. USPS had felt, for a long time, the need of an identifying number, because so many publications have the same or similar titles that it was difficult to be sure that postal address changes were going to the right places or that revenue and cost data were being collected accurately. It was fortunate that agreement could be reached on the use of the ISSN as, not only will there be an incentive for publishers to put the ISSN on their publications, but we have all been spared the use of yet another type of "identifying" number for serial publications.

Even without the postal regulation it is obvious to all of us who work with serials that ISSN are appearing on more and more publications. There has been some speculation about the possibility of using the number as a quick access to manual check-in files arranged in numeric order although no one seems to have tried this yet. In machine systems, of course, the ISSN can be used to access records that carry it, and Loveridge suggests that optical character recognition devices might read the number from the publication, leading to a considerable saving of input time.<sup>28</sup>

It is interesting to note that in the technical plan for the National Periodicals Center it has been proposed that the finding list giving titles available will include the ISSN. A library will be required to use the ISSN on all orders as a means of identifying the specific title needed.<sup>29</sup> It would seem imperative, therefore, that any questions concerning the reliability of the numbers be settled, and that there will be sources that can be consulted to determine ISSN that are not known. One such source appeared, after long delay, in 1978: *ISSN-Key Title Register*.<sup>30</sup> It is the first printed source that gives direct access to ISSN and key titles, but it contains only those assigned up to March 1975. Bradley covers very well some of the existing problems related to the use of ISSN and/or key title.<sup>31</sup> In far too many instances publishers have changed the title of a serial, knowingly or unknowingly, but have continued to print the original ISSN. Since ISSN and key

titles are assigned according to the *Guidelines for ISDS* (International Serials Data System) and the *Guidelines* are not concerned with choice of entry, there is often an immediate conflict in terms of national cataloging rules with the result that one ISSN may apply to two bibliographic records. In those cases the ISSN may uniquely identify the title of the serial, but it does not, certainly, identify the records for the item. The *Guidelines* and cataloging rules do not always agree, either, on what constitutes enough of a title change to require that a new ISSN/key title be assigned or a new bibliographic record be prepared for a serial. The national libraries planning to adopt AACR 2 in the future are concerned about the ways in which it differs from the *Guidelines*. Summary minutes of a meeting held by four national libraries in March 1978 indicated that a consistent definition of what constitutes a discrete bibliographic unit under AACR 2 and ISDS is needed because national bibliographic agencies cannot afford to catalog twice in order to meet the requirements of ISDS and their own bibliographic requirements.<sup>32</sup> A great deal depends on what course the revision of the *Guidelines for ISDS*, due in 1979, will take.

#### *Automation*

In March OCLC (no longer Ohio College Library Center since it yielded control to participating libraries all over the country and became OCLC, Inc. in December 1977<sup>33</sup>) announced that it would keep the ceiling of 150 institutions that could participate in its serials control subsystem until improvements could be made and a claims component added.<sup>34</sup> Problems with the use of the check-in module (the only module available) included the need for a library to keep a manual file of OCLC control numbers to get around inadequate search-key structures and the difficulty of attempting to predict the next expected issue without a known publication pattern for a serial. OCLC noted that only about one-fourth of the libraries authorized to use the subsystem were actually doing so. Reports from two of these libraries show a certain degree of satisfaction with the system although both indicated that there were some difficulties. Buckeye pointed out the complications caused by duplicate records in the OCLC data base<sup>35</sup> while Kamens noted that, not unexpectedly, the machine check-in did not rival manual check-in in terms of speed.<sup>36</sup> He felt, however, that any benefits in technical processing would come in the future, and that for the present it was an enhancement of the public service provided by a library to have the check-in record available at a terminal. Corey, writing from a library using the OCLC system for precatalog searching, full serials cataloging, and serial card production but not for serials check-in, raised the question that has often been debated before about whether serials processing can be done in the best and most efficient manner on a system that serves many libraries.<sup>37</sup> He suggested, too, that a decision to join a system for check-in purposes was one that could not be easily cancelled as records would require

conversion to another machine system, to a manual system, or might even be lost entirely.

Announcement came in 1978 of the definite continuation of the CONSER (CONversion of SERials) Project.<sup>38</sup> Under the original plan the Library of Congress was to have taken over the project in late 1977. Since LC was unable, because of fiscal and resources restraints, to expand its automation activities sufficiently to assume responsibility for CONSER, it was agreed that CONSER would remain at OCLC with OCLC assuming the management functions formerly handled by the Council on Library Resources. The Library of Congress and the National Library of Canada agreed to continue in their roles as centers of responsibility for the bibliographic quality and integrity of the CONSER data base. Since the number of CONSER records had long passed the original goal of 200,000, CONSER participants realized that they were now dealing with a "program" rather than a "project" although no change in name was being seriously considered. In view of the difficulties caused by duplicate records, the participants agreed to input only successive entry records for serial issues from 1967 (the date of the first edition of AACR) forward.<sup>39</sup> Latest entry records would be permitted for titles that changed before 1967, but participants would make whatever efforts they could afford to handle those as successive entries also. Late in the year the Library of Congress announced the publication of the second CONSER edition of the *MARC Serials Editing Guide*.<sup>40</sup> The *Guide* incorporates all changes to the MARC serials format and includes directions for tagging and input of retrospective and newly cataloged records according to the accepted CONSER conventions.

### Conclusion

Although 1978 may be considered to have been a rather quiet year in serials work as contrasted to the three years preceding it, there are certainly indications that the quiet cannot last too long. Rapidly expanding bibliographic networks, new cataloging rules, and rising prices have created questions and problems for serialists. It will be interesting to see how these questions are answered and these problems solved in future years.

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### *CORRECTION*

In the article by Robert D. Rodriguez, "Use of Alternative Class Numbers for Bibliography in the Library of Congress Classification System" (*Library Resources & Technical Services* 23:147-55) on p.151, the fourth line from the top of the page should read "the form subdivisions **Bibliography, Indexes, and Catalogs.**"<sup>9</sup> These tools"

# Resources in 1978

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**I**N THESE TIMES OF RESOURCE RETRENCHMENT, the most important news of 1978 was the publication of a plan to create a National Periodicals Center (NPC).<sup>1</sup> Periodical price increases are the single most inflationary factor in library budgets, and the publication in August of the Council on Library Resources' technical development plan for the establishment of such a facility is a most welcome step toward the long-term goal of relieving libraries of the burden of maintaining extensive local periodical collections. The Council on Library Resources envisions a centralized collection of periodical titles directly accessible to libraries throughout the nation with back-up referral libraries for provision of titles not held in the NPC. This national resource-sharing plan is only one of the many indications that economic pressures are causing librarians with limited budgets to stress measurement, analysis, and planning in the development of and access to collections. The resources literature of 1978 reflected concern about the economic events of the year: the tax revolt, poor stock market performance, persistent inflation, and severe dollar devaluation, and, more than it has in previous years, the literature emphasized practical management techniques for building collections and increasing their effectiveness during the times of financial stringency.

Special funding in 1978 encouraged the trend toward increased access and deliberate resource management. In August, the U.S. Office of Education awarded five million dollars from Higher Education Act funds, Title IIC, to twenty major research libraries for projects to make their unique resources more accessible. The largest grant of \$675,000 went to the University of California at Berkeley, UCLA, and Stanford for converting all of their serial titles to machine-readable form for the purpose of creating a combined data base and increasing resource-sharing activities.<sup>2</sup> At the same time, the Association of Research Libraries announced plans to offer management consultant services over the next five years in the areas of collection develop-

ment, management processes, and library services to two- and four-year colleges and to universities as part of a new Academic Library Program. Funded by the Andrew Mellon Foundation and the Council on Library Resources, this program will train 100 librarians to serve as consultants, provide the consultants with special guides and manuals, and give back-up assistance where necessary.<sup>3</sup> These two programs will have long-term effects on collection development in college and university libraries.

Resource-sharing activities during 1978 were encouraged by the Title IIC grants that made funds available for five cooperative projects. Two older resource-sharing agreements were also altered during the year. There was a change in the membership of the Research Libraries Group (RLG), and the Hampshire Interlibrary Center changed the focus of its cooperative storage program. The draft *Standards for University Libraries*, published in 1978 by a joint ARL/ACRL committee, stresses participation in cooperative programs that will permit access to collections at other libraries.<sup>4</sup> The standards note that even the most comprehensive research collections require supplementary arrangements for sharing resources and improving access. A CLR study by Wilmer Baatz on collection development in large research libraries notes that "cooperation turns out to be much more complex than most librarians had thought. Local faculty are less than enthusiastic if the materials they need are located elsewhere than in their library. . . . Major progress in this area has come only when dollars reward cooperative effort."<sup>5</sup>

Collection development literature in 1978 focused on collection analysis, collection-use studies, selection, and bibliometrics. The last term refers broadly to the quantitative analysis of the use of publications, e.g., journal citation studies. The editor of *College & Research Libraries* noted an increase in this type of study in 1978: "Interest and concern for the library's periodical collection—the use journals receive and the composition of the collection—are shown in the number of manuscripts on that subject submitted to *C&RL*."<sup>6</sup> The periodical-use studies employed a variety of techniques for determining user preferences—counts of photocopies, interlibrary loan titles, reshelfing; faculty and student questionnaires; circulation statistics; and citation counts. The acquisitions articles for the year had an equally practical approach covering such topics as allocation of materials funds, vendor evaluations, exchange service, gift appraisals, approval and standing order plan evaluations, bibliographic searching, evaluation of microform collections, and the conversion to a serials vendor. The resources literature of 1978 appears to have more direct applicability to working situations than the literature of past years.

A prevalent theme of 1978 resource literature was the economic crisis, and statistics for the year confirm this concern. Prices for materials continued to rise at an alarming rate in 1978. Periodical prices rose by 12.2 percent from 1977 to 1978,<sup>7</sup> and Herbert White reported

that "for the years 1969-73, large academic libraries had reported an annual average periodical price increase of 11.2 percent for all subscriptions, for 1973-76 this became an annual rate of 15.9 percent, a startlingly sharp increase."<sup>8</sup> The final eighteen-month *Publishers Weekly* figures for American hardcover books showed a 10.5 percent increase from 1976-77, and preliminary figures (12 month) for 1978 showed an 11.5 percent increase over 1977 for hardcover books.<sup>9</sup> From the week ending August 19, 1977, to the week ending August 18, 1978, the dollar sank 12.9 percent versus the British pound, 18.8 percent versus the German mark, and 50.2 percent versus the Swiss franc.<sup>10</sup> Libraries purchasing materials from these countries have had to contend, not only with inflation, but also with the shrinking of the dollar. The outlook for 1979 is also discouraging. According to the Book Industry Study Group (BISG), "there is a strong likelihood for double digit increases in paper prices in 1979."<sup>11</sup> John P. Dessauer of BISG is pessimistic about great improvement in the fortunes of libraries faced by heavy inflation in subscription prices, curtailed budgets, rising prices of imports, and the tax payer's revolt.<sup>12</sup>

In summary, two major resource trends emerged in 1978. Acquisition and collection librarians are utilizing improved management techniques to compensate for austerity budgets, and they are seeking to increase opportunities for resource sharing. The literature of the year covered these important subjects: resource sharing; collection-analysis and -use studies; acquisition methods and procedures; publishing, price trends and budgetary procedures; collection funding; and continuing education.

#### *Resource Sharing*

As noted earlier, the CLR plan for a National Periodicals Center with its referral libraries is the first step in the development of a national resource-sharing system. Libraries that cannot afford extensive periodical collections can rely upon the NPC or regional libraries to provide access to materials unavailable locally. The technical development plan originated in the fall of 1977 when the Library of Congress commissioned a study by the Council on Library Resources on the establishment of a facility to provide national access to periodical literature. In August 1978, CLR released its study that proposes a centralized collection of 36,000 current titles that might eventually reach 60,000, a finding tool listing titles and holdings of the center and referral libraries, delivery services including a back-issue service, an article sales service, an outlet for on-demand publishing, and/or a source for the full text of the material published in synoptic form.<sup>13</sup> In order to make most of the estimated 200,000 currently published periodical titles accessible, the NPC will provide service through a system of referral libraries. All requests will be routed through the NPC and require payment of a fee. Copies will be provided in paper or on microfiche, and the NPC will assure that all provisions of the copyright

law are fulfilled. The proposal calls for the construction of a building with 130,000 net square feet and details the start-up costs. The report recommends that a National Library Agency be established to govern the center as well as coordinate its operations with the development of other national programs of bibliographic control, communications networks, and preservation of materials. The Association of Research Libraries (ARL) endorsed this proposal in October along with the Association of American Universities and the executive board of the Center for Research Libraries. After an initial period, it is expected that the NPC will serve all types of libraries, including special, public and school libraries as well as consortia and bibliographic networks. The NPC report is being discussed within the library community and is expected to generate legislation to implement such a facility. Nancy Gwinn believes that the creation of a National Periodicals Center will permit more rational collection development, based on known costs of owning versus borrowing; will ease the burden of large institutions, which are net lenders; will encourage wide adoption of serial cataloging standards based upon NPC's bibliographic control system; and will encourage local resource-sharing efforts by better data on costs and location of materials.<sup>14</sup>

The 1978 Title IIC grants noted earlier encouraged new cooperative collection activities and enhanced some traditional resource-sharing arrangements. With the award, the University of Chicago, the John Crerar Library, and the Center for Research Libraries will produce a machine-readable data base of approximately 21,000 current serial titles received by these three libraries. The New York State Library received funds to help it and other major research libraries in the state interlibrary loan and resource-sharing network add their monographic holdings to the OCLC data base. Missouri Botanical Garden and the New York Botanical Garden will enter botanical/horticultural holdings from both libraries into a national data base. Duke University, the University of North Carolina at Chapel Hill, and North Carolina State University, which had existing collection development agreements, received monies to purchase jointly materials corresponding to their assigned responsibilities.<sup>15</sup> The Stanford/Berkeley/UCLA grant has been described above.

Two long-standing resource-sharing arrangements were also altered during the year. There were changes in the membership of the Research Libraries Group (Columbia, Harvard, New York Public, and Yale), a major resource-sharing consortium. Harvard University withdrew from the group in spring 1978 after the group decided to adopt BALLOTS as its on-line bibliographic system. However, by the end of the year, RLG had added Stanford to the consortium and planned to bring in four or five other research libraries. RLG announced that these libraries would act as custodians for the new Research Libraries Information Network (RLIN, formerly BALLOTS), which they hoped would eventually consist of all or most research libraries in

the country. Two of the goals of the integrated RLG and RLIN operations relate to resources: improvement of physical access to collections as a means of sharing resources and the coordination of collection development and conservation/preservation among libraries.<sup>16</sup> Another major resource-sharing effort changed its focus in 1978 when the decision was made to distribute the holdings of the Hampshire Interlibrary Center maintained by Amherst College, Hampshire College, Mount Holyoke College, Smith College, and the University of Massachusetts, Amherst. The emphasis of the consortium will shift from storage of little-used materials to general coordination of the five college library activities, including bibliographic coordination of the decentralized collection, feasibility studies for a cooperative circulation and acquisitions system, and exploration of joint development of a Five College Non-Print Materials Center, possibly to be located at Hampshire College.<sup>17</sup>

Cooperative purchasing is one method of sharing resources, and three articles have appeared that describe how such coordination can be achieved. David O. Lane reports on the METRO Cooperative Acquisitions Program, in which member libraries contribute a percentage of their acquisition funds to a pool fund and members of a joint steering committee make selections and place the materials in appropriate libraries. From 1972 to 1975, 1,800 titles were purchased cooperatively, using member and grant funds, and listed in a separate METRO publication. The cooperation continues and the premises, policies, procedures, and deposit agreements of this program are included in Lane's case study.<sup>18</sup> Brewer, Pitkin, and Edgar describe the cooperative serials acquisition and cancellation program of the Northeastern Ohio Major Academic Libraries (NEOMAL) consortium. Lists of titles proposed for cancellation or acquisition are mailed to member libraries, and responses are sent by TWX listing member holdings of titles in question. Once all members have received this information, they approve or disapprove of the cancellation or acquisition list of the initiating library. Cancellation requires a unanimous vote. NEOMAL keeps statistics on the costs of titles cancelled or not acquired because they are held elsewhere. The seven libraries of NEOMAL have saved \$47,500 in subscription costs over the first two years.<sup>19</sup> Maxin and Chilson discuss a New York cooperative-purchasing program of the North County Reference and Research Resources Council. Selection was done by a Cooperative Acquisitions Committee, which selected serial titles on the basis of the council's interlibrary loan requests. (The need for monographs was so diverse that "collective funds could not effectively be used to increase area self-sufficiency" for that format.) Titles were placed in libraries where complementary materials or lengthy backfiles were present, and guidelines were developed for the sharing of the materials.<sup>20</sup>

In articles published in 1978, the required elements for effective resource sharing were examined from the standpoint of a library direc-

tor, an administrator, and a professor. Patrick O'Brien believes three factors must be present for successful resource sharing: holdings of all the libraries in a group must be identifiable to members of the group, all identifiable titles must be accessible, and titles not owned within the group must be obtained by the library assigned the responsibility for collecting in pertinent subject areas. He urges automated bibliographic access, not only for availability, but also for identification of little-used materials for low-cost storage.<sup>21</sup> James Furman sees the emphasis in higher education shifting from physical growth to "qualitative growth" as enrollments decline and universities cut costs. He asks whether libraries are "efficiently and accountably utilizing their present resources," and suggests that libraries could do more to share existing resources and respond to user demands. He points to the experiment underway at the University of Illinois involving computerizing of circulation as a promising development.<sup>22</sup> Allen Kent views five goals as the "*sine qua non* of resource sharing: (a) bibliographic access, (b) acquisitions policies, (c) delivery, (d) integrated systems, and (e) appropriate application of technology."<sup>23</sup>

Accounts of experiences of two libraries with resource sharing suggest ways for strengthening cooperation. John Shipman describes how the University of North Carolina at Chapel Hill is making the most effective use of the Center for Research Libraries (CRL). A subcommittee of UNC's Collection Development Committee oversees CRL activities and formulates policies relating to the center. One major responsibility of the subcommittee is publicity, including newspaper articles in the local and regional press, distribution of information packets to the faculty, and workshops within the library. Statistics are kept on all loans requested and materials received from CRL. The journal access service has been used consistently, and the center's holdings of foreign government documents, dissertations, and newspapers have been particularly helpful.<sup>24</sup> Bain and Casey discuss their experience with cooperation between a state-supported psychiatric library and a privately supported medical college library. The state center houses psychiatric and related collections, and the college is paid for staffing the "branch," purchasing materials, and other services. One special feature of the cooperation is an annually renewable contract that spells out the arrangements. There are also joint policies and operational procedures developed, and, in the event of a dissolution of the contract, provision for restoration of separate collections has been made.<sup>25</sup>

According to Robert Moran, library cooperation among academic libraries has had little impact on the availability or accessibility of information. He attributes this ineffectiveness to the lack of organizational and attitudinal changes. He recommends that substantial planning efforts be made, which address organizational and behavioral changes, that a specific individual be assigned sole responsibility for cooperative planning, and that involvement of all levels of library staff

and users be encouraged.<sup>26</sup> Although Moran's pessimism about past cooperation among academic libraries is justified, the events of 1978 were encouraging. As a result of substantial planning, the framework for a national system of interlibrary cooperation, embodied in the NPC, has been laid. At year's end OCLC announced that its automated interlibrary loan system was ready for testing. Two of the Title IIC projects (Indiana and Stanford/Berkeley/UCLA) will enlarge the already growing data base of machine-readable serial titles. All of these developments set the stage for more meaningful national interlibrary cooperation. Librarians attending the White House Conference will need to remind the federal government of the major investments required for cooperation. The literature of 1978 is helpful in outlining the requirements for cooperation and giving some practical models for local cooperation.

Resource sharing on an international, regional, and national basis was described in three publications. Johan van Halm examines the barriers to international exchange of information and suggests that countries need to formulate a national information policy and participate more fully in international information projects (networks, schemes, and policies).<sup>27</sup> Koops and Stellingwerff present papers from their West European colleagues describing cooperative collection building in university libraries in the countries of Belgium, England, Germany, and Holland.<sup>28</sup> Wojciech Zalewski recommends comprehensive coverage of Russian and East European materials through a microform project similar to ARL's Foreign Newspaper Microfilm Project or the Latin American Microform Project of the Center for Research Libraries in Chicago. He is concerned about duplication of effort in the filming of Slavic materials, and pleads for more national coverage.<sup>29</sup>

#### *Collection Development and Use Studies*

Two comprehensive studies of collection development were published in 1978, and another smaller-scale study begun. Magrill and East review collection development activities in large university libraries during the 1970s, covering the acquisition environment, selection priorities, special problems such as serials, gifts, and exchanges, cooperative programs, and quantitative approaches to control and evaluation. Their paper contains an extensive bibliography incorporating the major collection development articles of the last twenty years. They conclude: "From the emergency adjustments being made by librarians to meet budget cuts, three trends emerge as among the most significant: greater selectivity in new acquisitions, more emphasis on efficient procedures, and increased reliance on other libraries."<sup>30</sup> Wilmer Baatz, on the basis of visits to nineteen ARL libraries, reports that libraries rank space and personnel needs ahead of materials funds as their top priority needs, but that they are suffering from the lack of materials funds and equipment monies, particularly microform

equipment. According to Baatz, retrospective purchasing has been seriously curtailed in most ARL libraries due to the shortage of book and serial funds. Another result of the budget crunch is the new upsurge of interest in use studies. Librarians are seeking to find out what subscriptions can be cancelled without hurting library service and what materials can be sent to storage without user complaints. Baatz is pessimistic about cooperation as an antidote to high costs, since faculty members are either not interested in cooperation or are negative about it. He concludes that cooperation is viewed more sympathetically by the administration than by the faculty.<sup>31</sup> The National Endowment for the Humanities funded a smaller-scale study on collection development in 1978. Hugh Cline, a sociologist from Educational Testing Service, began case studies of the collection development policies and practices at seven college and research libraries: Brown University, Earlham College, Pennsylvania State University, Stockton State College (New Jersey), University of California at Los Angeles, University of North Carolina at Chapel Hill, and the University of Wisconsin. The project will analyze the structure and function of collection activities and make recommendations for improving the efficiency and effectiveness of academic library collection development.<sup>32</sup>

In 1977 considerable space in the resources article was devoted to describing the trend toward collection analysis. In 1978 the ARL Collection Analysis Project (CAP) went into a second phase, expanding its program to the University of California at San Diego, Brigham Young University, the University of Illinois, and Case Western Reserve. Three papers delivered at the ACRL Conference in Boston reported on this program. Jeffrey Gardner, one of the founders of CAP, described the program and its objectives. Employing a self-study methodology, the program seeks to make "a systematic review of current collection practices leading to workable recommendations for change."<sup>33</sup> The leaders of the project at M.I.T. and Arizona State also reported on their experiences with CAP. Jutta Reed described the Collection Analysis Project at M.I.T. as a process that clarified M.I.T.'s collection development philosophy and goals, examined the allocation process, and focused efforts on improving the effectiveness of the collection development program through communication with users, evaluation of collections, organization of the collection development process, preservation, and resource sharing. Reed emphasizes the important role of communication with users in the university community and within the library among selectors and sees coordination of collection activities systemwide as a critical aspect of collection management at M.I.T.<sup>34</sup> George Soete reported on the Collection Analysis Project at Arizona State and stressed the role that CAP played in changing "staff and administration attitudes toward collection development and toward each other" in encouraging staff development. The use of self-study, negotiation, and report writing in the CAP program has

encouraged a new approach to collection development problem solving at Arizona State.<sup>35</sup>

The literature of 1978 reveals that in response to budgetary pressures librarians are beginning to analyze their collections and collection building practices using both qualitative and quantitative measures. Harry M. Kriz studied citations in master's theses of engineering students at West Virginia University and discovered that students cited nonjournal items two-thirds of the time. As a result, he cancelled subscriptions and increased book purchasing, and circulation has risen by 62 percent over the past four years, without an increase in interlibrary loans.<sup>36</sup> Charles J. Popovich examined dissertations from his institution and from outside and learned that use of foreign-language materials by doctoral candidates in business/management is practically nonexistent and that there is a high rate of obsolescence in business/management materials. His study also showed that SUNY Buffalo's collection in this field was balanced except perhaps in miscellaneous forms of publications such as newspapers, working papers, manuscripts, conference papers, etc.<sup>37</sup> Donald J. Morton asked F. W. Faxon to supply him with a list of medical journals indexed in major medical reference tools, and a list of his library's titles (with the indexed titles excluded). He then asked the faculty to list the important titles and any titles needed that were not on either of the lists. Based on faculty comment, Faxon then provided the library with updated lists that were used to cancel or add journals, reflecting the needs of the faculty.<sup>38</sup> Barber and Mancell studied citations from papers of college-bound students from grades 10-12. Sixty-seven percent of the citations were to monographs, twenty percent to journals, and the remainder to media and other materials. Journal usage followed Bradford's law that "presents a pattern in which a relatively large number of articles used are concentrated in a few journal titles, while many journals contribute very few articles." They also studied the titles most cited by nineteen major selection tools for young adults and discovered only 22 percent overlap. Their paper concluded that school librarians need to take more account of usage patterns for the purposes of selection, budgeting, and cooperation.<sup>39</sup> An analysis of music libraries in the country by William M. McClellan based on a survey of academic music librarians and members of the American Musicological Society, demonstrated a "strong relationship between the reputations of graduate programs in music departments and schools and the reputations of academic music libraries supporting such programs."<sup>40</sup> Collection analysis in the above cases relied upon quantitative indicators (citation studies) or qualitative judgments (faculty surveys).

A number of use studies appeared during the year related to collection development. Bolgiano and King discuss methods used to profile their periodical collection at James Madison University in Harrisonburg, Virginia. In compiling their profile, they gathered data on cur-

rently received titles, surveyed faculty on the adequacy of the collection, and analyzed interlibrary loan periodical transactions and journal citations in master's theses. They recommend basing collection development decisions on such solid data.<sup>41</sup> Johnson and Trueswell report on the use of a weighted criteria statistic score for decision making on journal selection based on statistics on journal photocopying at the Air Force Geophysics Laboratory Library (AFGL) and a survey of the scientists and engineers using the library. Several objective criteria, including amount of use of a journal, frequency of publication by AFGL staff in a journal, and journals citing or cited by AFGL publications, etc., were used to develop a "Weighted Criteria Statistic Score." The authors indicate that "only twenty-five percent of the current subscription journal titles are identified by any of the user-related criteria" and are seeking additional criteria before cancelling noncriteria-list journals.<sup>42</sup> Elizabeth Pan finds that "the frequency with which journals are cited is at least as reliable in predicting the potential use of journals in libraries as the judgment of experienced librarians familiar with the journals and their users."<sup>43</sup> She tested this conclusion using 169 journal titles from 6 medical libraries and the *Science Citation Index*. The participating libraries employed circulation, interlibrary loan, photocopy, and in-house statistics to measure use. Ruth Schwartz, who measured use of journals at Fairleigh Dickinson University, reports that the most used journals are indexed and in the English language. She also notes that "while requests for back issues in the humanities before 1964 were three times higher than for back issues in the sciences, this ratio changed in titles requested from the past ten years; we recorded as many requests for the sciences as for the humanities." She concludes that use studies are helpful in making periodical selection and retention policies.<sup>44</sup> Robert Goehlert indicates that "citation analysis may not constitute valid guides for journal selection," since there were only seventeen titles in common among a list of the fifty most cited, requested, and used journals. He suggests that further use studies be made to compare the relationship between use of a title and citation frequency.<sup>45</sup> W. M. Shaw suggests a practical technique for measuring journal usage in libraries. In a study done at Case Western Reserve University (CWRU) use data was generated by "applying a small, pressure-sensitive label to the spine of a volume the first time it is reshelfed by library personnel."<sup>46</sup> During the course of the study, approximately thirty-two months, 61,000 volumes and 1,500 titles generated no use at all. The unused items represent a pool for determining candidates for cancellation, storage, microform conversion, or distribution to consortium partners. Two bibliographies in 1978 explored negative and positive use patterns: weeding and duplication. Barbara A. Rice offers an annotated bibliography on weeding in academic and research libraries, describing only those titles, which either "study a specific situation or review research on weeding."<sup>47</sup> Robert A. Almony, Jr., reports on the literature of systematic dupli-

tion and gives three examples of libraries where duplication is planned.<sup>48</sup> As can be seen from these examples, use studies are very subject specific, and every library will have a different usage pattern depending upon its clientele. Although one cannot generalize from these use studies, their advantage for local collection decisions is clear.

Bibliometrics, the use of mathematical methods in the analysis of communications, is beginning to play an increasing role in collection development. Citation studies, computer systems, and mathematical models using bibliometric data are providing resource librarians with better information for decisions. Beilby and Evans, in a paper for the ACRL meeting and also in an article in *Collection Management*, describe a management information system for use in collection development. The system provides for information on publishing output and costs, information on academic programs and their demands on library collections, information on current acquisitions patterns, information on collection use and predicted future use, and information on user satisfaction. The sources for such data are diverse. Machine-readable data are available on publishing output (Bowker, Faxon, MARC, etc.), academic programs (university administrative records, HEW statistical data), library collections (OCLC archive tapes, BALLOTS records, library catalogs, etc.), library acquisitions (machine-readable acquisition files), and library use (machine-readable circulation files).<sup>49</sup> The SUNY Office of Library Services has designed computer programs to relate these factors one to the other, and the system will be offered as a service to other libraries. An example of the analysis that could be performed is a match of total publishing against the current cataloging of a single library or system of libraries.<sup>50</sup> One drawback of the system for large research libraries is the current exclusion of data on foreign publications not distributed in the U.S. and non-LC-classified publications. Michael D. Koenig discusses the potential of citation data for analysis of the literature of the arts and humanities. (The Institute for Scientific Information will soon be publishing the *Arts and Humanities Citation Index*.) Citation data in the humanities will show the interrelationships of journals and works, which will be of interest to scholars. The *Arts and Humanities Citation Index* will contain implicit citations, i.e., mention of a specific work of art or piece of literature for which there is no formal reference or citation. Citations will also show the influence of one school upon another and allow the study of the degree of separation of scientific and humanities literature. According to Koenig, at some time citation studies may be extended to monographs.<sup>51</sup> Bruce C. Bennion uses a sampling technique to measure the use of standard selection sources in undergraduate libraries. He points out that undergraduate libraries acquire relatively few titles from the standard selection sources and are slow in acquiring recent titles.<sup>52</sup> William McGrath examines the relationships between hard/soft, pure/applied, and life/nonlife disciplines and subject book use in a university library, and his research indicates that as subjects go from

hard to soft, subject book use increases. There was little support for the hypothesis that greater subject book use occurs in the pure disciplines as opposed to the applied. There was no support for the theory that the number of books charged out would be greater in the life sciences than in the nonlife disciplines. McGrath believes that it is important to consider university programs and differences between disciplines when acquiring titles, and that blanket orders are not wholly satisfactory because they are based on economic schemes.<sup>53</sup> Royce and Funk demonstrate that quantity of subject articles in a journal has little or no bearing on the quality of subject articles. Instead, the quality weight (similar to the impact factor where the number of times a journal has been cited in *Science Citation Index* is divided by the number of articles it has published during a specified period) is strongly correlated with a journal's circulation (i.e., number of copies sold) and a high rejection rate for articles submitted for publication. They are concerned that "journal citation counts may actually be reflecting circulation rather than true quality and feel this area needs more research."<sup>54</sup>

Although quantitative collection studies seem to be on the increase, a number of articles emphasized the factor of qualitative judgment in selection. Michael Moran examines quantitative standards for collections and finds that many formulas are based upon an abstract concept called "adequacy," which is ill defined. He argues that quality does not depend upon quantity and advocates recommending to budget officers that libraries move closer to the collection size of libraries of known excellent quality. He concludes that collection development officers are responsible for tailoring the quality of selections to the quality of education offered at their institutions.<sup>55</sup> Kraft and Polacsek describe a practical model for selection of journals and include examples of forms used in selection of journals. They look at three factors that measure the worth of a journal: usage, relevance, and availability elsewhere. Usage can be measured by circulation, photocopying, interlibrary loan, and citations, whereas relevance is a subjective factor, including the opinions of reviewers and experts, appropriateness for the user community, status of the initial requester, etc. Availability elsewhere is related to the convenience and cost of acquiring the title from another library.<sup>56</sup> F. Wilfrid Lancaster speculates about the adaptability of libraries still tied to selection of books when technology is moving toward the paperless society. He questions the judgment of librarians who are not preparing for the electronic distribution of information and asks rhetorically: "Whither libraries or, wither libraries."<sup>57</sup> Albert Perdue believes that collection development is ultimately a political task that requires the constant resolution of conflicts among special faculty interests, among publications, and between librarians and administrators. Selection of quality titles requires "time and a knowledge of appropriate literatures" as well as a political sense.<sup>58</sup> Dennis W. Dickinson believes, on the other hand,

that "subject specialization in academic libraries faces an uncertain future." He sees factors such as declining resources, the necessity to cover multiple subject areas, the lack of substantive training, the questionable need for balanced collections, and the lack of compatibility with library organizational structure militating against the pattern of subject specialists in libraries. He believes blanket/approval plans, publishing on demand, and interlibrary cooperation are making it possible to move away from a system of subject specialists and foresees a "small number of resource centers, such as the Center for Research Libraries, which will collectively acquire virtually everything, while academic libraries direct their resources to meeting what are coming to be recognized as more limited local needs."<sup>59</sup>

Two articles on collecting women's studies materials appeared in 1978. Esther Stineman discusses the problems associated with collecting women's materials and includes a bibliography of basic reference and periodical resources to support women's studies.<sup>60</sup> Helen Rippier Wheeler criticizes libraries that have "prejudice—or lack of awareness" toward women's studies materials. She feels this attitude will hurt research in women's studies.<sup>61</sup>

An unexplored area of collection development is the further development of collections already in house. Libraries need to give more emphasis to using their current collections. Northwestern University with its Scholar Librarian Program is concentrating on exploiting its current collections through the employment of staff who are well trained with advanced credentials and can work with faculty to make better use of collections already there. C. Roger Davis argues that a collection development program merits central direction, full-time coordination, and advocacy. He believes a "collection developer" must go beyond selection and stimulate the advancement of learning through publishing, lectures, and association. He notes: "The old degrees are still needed but with a degree of difference: the ability and willingness, through print, lecture, or association to set goals, raise funds, involve satellite institutes, serve the faculty better by saving more, and promote the liberal arts."<sup>62</sup> Ford and Nakata urge better utilization of government publications for research in the humanities. They identify agencies that publish documents of direct interest to humanities scholars and give examples of the use of historical material in the serial set. They recommend that librarians "aggressively participate" in the curriculum by introducing government publications "to researchers and in course-related instruction, and by teaching the use of specialized indexes to access these materials."<sup>63</sup>

#### *Acquisition Methods and Procedures*

In this period of severe inflation and budget cuts, it is important to make acquisition procedures cost-effective. Ted Grieder has provided a manual of acquisition procedures and routines for college and research librarians, which will have applicability elsewhere.<sup>64</sup> His book

includes sample order forms, work flow charts, approval agreements, and collection policies. The statistical section not only covers forms, but also explains how to write an annual report. This is a basic operational text for acquisitions. Unfortunately, the book does not have a bibliography and excludes discussion of microforms, periodical acquisitions, and documents.

Many of the acquisition articles published in 1978 were concerned with the measurement and evaluation of acquisitions services. There were evaluations of vendors, standing orders, approval plans, and microform collections. Stokley and Reid report on a performance study of five book dealers used by Louisiana State University Library. Each dealer was judged on the basis of 400 orders. Purchase orders and invoices were examined to determine dealer performance on receipts, turn around time, delivery rates, average discounts, average cost per title, claims made and reports received, summary of problems, etc. They conclude that it is advantageous "to send purchase orders to several dealers instead of one," using different dealers for different purposes. Some dealers deliver faster, whereas others give better discounts or problem-free service.<sup>65</sup> Robert Lincoln compares the service of selected publishers, publisher/agents, distributors, and wholesalers in Canada and finds that "wholesalers as a group delivered orders more slowly than other vendors." He recognizes that wholesalers offer service as well as delivery and suggests more research needs to be done on order fulfillment from wholesalers.<sup>66</sup> Grant and Perelmuter evaluate approval vendors and conclude that "Ballen supplied books in the shortest amount of time; Blackwell/North America and Baker and Taylor provided the most accurate bibliographic information; and Baker and Taylor offered the best discount."<sup>67</sup> There is a consensus that it is important for individual libraries to take the time to ascertain the level of service received locally, since it is difficult to generalize the results of vendor surveys.

Hulbert and Curry assess the value of an approval plan in a health science library and determine that they have been "able to reduce appreciably the work required for book selection."<sup>68</sup> They now ignore the reviews of twenty-seven publishers and have cut the number of reviewing sources by seventeen. Nevertheless they still indicate that the approval plan serves only as a complement to other methods of ordering. Posey and McCullough examine the benefits of separate school approval plans. They find that the success or failure of a plan depends upon special circumstances in a library, that is, "it is evident that there is a correlation between funding level and the espousal of an approval plan."<sup>69</sup> They suggest that a frequent problem of approval plans, the uncertainty factor, could be helped by on-line access to the vendors file of treated titles, and they recommend that vendor software make available connective logic ("or," "nor," "and") to alleviate the problem of too specific a profile. Heroux and Fleishauer describe a methodology for review of standing orders for cancellation.

They use a point system that contains the following criteria: university program support, ILL availability, language, price, frequency, access, and circulation.<sup>70</sup>

Three articles and a book were published in 1978, which should aid acquisition librarians in evaluating microforms. Suzanne Dodson provides a detailed description of 200 microform collections, giving publisher, price, format, review information, arrangement and bibliographical control, bibliographies and indexes, and scope and content.<sup>71</sup> Mark R. Yerburgh describes a system for the evaluation of significant microform collections, sets ranging in price from \$1,000 to more than \$100,000. He suggests that librarians be aware of the microform marketplace; discuss purchases with faculty; check on external and internal bibliographic control; determine fair cost, using a series of questions he proposes; and consider legibility and other technical features of the product.<sup>72</sup> Carl Spaulding reports on the strengths and weaknesses of three major types of film, silver-halide, diazo, and vesicular, currently available in the library marketplace and defines their special characteristics. He recommends that libraries pay more attention to their current storage standards for film and suggests that a sample of films currently held in libraries be tested to determine the effects of storage. He also urges librarians to develop "means for determining the better diazo and vesicular films for library use and for insuring that micropublishers use these particular non-silver films in preference to others."<sup>73</sup> (Caution: After reading Spaulding's comments, librarians should read "Some Second Opinions," which speaks to the issue of long-term preservation. Of particular interest are Charles LaHood's and E. Dale Cluff's remarks.)<sup>74</sup> MacDonald and Sieger review the history of the depository system and the role commercial publishers played in bringing "documents collections and their librarians into the main stream of library service."<sup>75</sup> They examine the criteria for distribution of microforms as proposed by the Depository Library Council and suggest that modifications are needed. They recommend that space consideration be given equal priority, that cataloging availability be accounted for, and that all depository libraries be surveyed before completing conversion plans. They also plead for the government to make every effort "to avoid distributing numbered series or sets in dual formats regardless of printing source."<sup>76</sup>

Gift and exchange procedures were also discussed in the literature of the past year. James Weaver examines the gift appraisal practices of the Northwest Association of Private Colleges and Universities (NAPCU). He finds that only half of the libraries refrain from doing appraisals of gifts for their donor's tax uses. In checking with the IRS about the legality of libraries providing such information, he discovered that the IRS places two conditions on such appraisals: the donor must be knowledgeable as to the value of gift and capable of determining its fair market value, and the library should be experienced and knowledgeable in valuing literary material. Weaver suggests more

research needs to be done in this area.<sup>77</sup> Harriet H. Carter describes her participation in the Duplicate Exchange Union and the Medical Library Association Exchange. Using these two national exchange programs, she was able to reduce costs by cancelling subscriptions and "obtaining them on exchange at a fraction of their purchase price."<sup>78</sup> Nathan R. Einhorn reports on a survey on the use of reprography for exchange by IFLA institutions. Although reprographic materials sent on exchange have doubled since 1960, "only about one-sixth of the institutions queried do use reprography in exchange."<sup>79</sup> Microfilm and photocopy predominate as the type of reprographic material used. He notes the lack of uniform technical specifications for reprography and exchange bases (i.e., the dollar or page limits on exchanges) and believes there is an opportunity for further research in this area.

Other acquisition procedures covered in the literature of 1978 include searching, prepayment, nonprint acquisitions, technical report acquisitions, serial agency conversion, inventory techniques for unorganized collections, acquisition rate models, and the development and administration of a storage facility. Janet L. Flowers reports on a time study of the searching section at the University of North Carolina, Chapel Hill, with statistics on average searching times, number of titles searched, types of material searched, and hours spent searching. She found the information gathered useful for justifying additional staff and analyzing work flow.<sup>80</sup> Marion T. Reid gives five case studies of prepayments in which the library was cheated and suggests ways libraries can determine the legality of a publishing operation as well as possible remedies for the loss of funds.<sup>81</sup> Helen J. Ackerman outlines a college library system for acquiring nonprint materials. In her system, faculty preview and evaluate materials before purchase, and their evaluation is used to justify purchases. She lists the review media and describes a centralized system of storage and retrieval.<sup>82</sup> Marilyn L. Miller examines the history from 1918 to 1975 of school library collections and finds them evolving from book-centered collections to media collections. She also looks at the selection process of two school systems: Kalamazoo (Michigan) Public Schools and Anne Arundel County, Maryland.<sup>83</sup> Newman and Amir analyze the technical report collection patterns of the Applied Physics Laboratory, Johns Hopkins University, and show how they evaluated their NASA subscriptions for technical reports by comparing the cost of automatic distribution with the cost of individual purchases and determined which subscriptions were cost-effective. Using circulation statistics they weeded their collection and switched to purchase of microforms to reduce costs and space requirements.<sup>84</sup> Doris E. New describes the process of converting orders at the University of California (Irvine) from a variety of sources to a new serials agent. She includes a copy of the questionnaire used to evaluate the serials agent and summarizes the steps necessary for making a conversion.<sup>85</sup> Alley and Cargill indicate the steps required to organize a large purchase for selection. They recommend

labelling the spine and title page with a unique number and filming the title page. Once this step is completed, the library prints a copy of the title page on a 3-by-5-inch card. These cards can then be used for inventory purposes.<sup>86</sup> William J. Hubbard reports on the development and administration of an off-campus storage facility. Two types of material were selected by collection staff for transfer: Dewey-classed materials and pre-1950 serials. The methodology for collection control, moving materials, and paging materials is outlined in detail.<sup>87</sup> George V. Hodowanec offers libraries a mathematical model for determining a recommended rate for acquisition of materials. It is based upon per student circulation and number of undergraduate and graduate courses offered by the institution calculated per FTE student. The per student acquisition rate (PSA) and per student circulation rate (PSC) show "a continuous incremental relationship." At one point additional acquisitions per student will no longer yield additional circulations per student.<sup>88</sup>

Preservation is an increasingly important aspect of resource management, and in two separate instances in 1978, cold storage proved an effective antidote to infestation by bugs and damage by flood. In January 1978, Yale University Library reported putting rare books infested by bugs into a freezer chamber in the basement of the Beinecke Rare Book Library. According to Yale experts, "the materials are completely deinfestized."<sup>89</sup> Although some experts disagree with this view, Yale will henceforth send all Beinecke acquisitions through the deep freeze. In November 1978, 40,000 Stanford University Library books were damaged by flood. Within 48 hours, the books were trucked to temporary cold storage, and Stanford intends to find facilities for freeze-drying or vacuum-drying the books.<sup>90</sup>

Automated acquisitions was the topic of a program meeting at the ALA 1978 Annual Conference and a survey of the Association of Research Libraries. At the ALA meeting sponsored by the Resources and Technical Services Division and the Association of American Publishers Joint Committee, several speakers warned librarians about the need for advanced planning and the high cost of automating acquisitions. Others cited the advantages of automated acquisition systems, including better management data and increased standardization. One vendor John Secor expressed concern about vendor-developed systems forcing smaller dealers out of business and suggested that the impetus for automated systems should come from libraries.<sup>91</sup> An ARL SPEC flyer issued in May 1978 confirms many of the program's conclusions. "As with circulation systems . . . most libraries report that automation has helped standardize processes and has resulted in more efficient use of staff, but few libraries report reduced costs for processing as a result of automated acquisitions."<sup>92</sup> Thirty-six of the seventy-seven libraries reported automated acquisitions activities in their institutions, using primarily in-house systems. More than half of the systems are reported to have interface with other systems, but

there are few truly integrated multifunctional systems. Karen L. Horny describes an automated technical processing system, the Northwestern On-line Total Integrated System (NOTIS-3), which includes an ordering subsystem. It is possible to order, claim, and receive monographs and serials using this system. NOTIS-3 produces automatic claims for overdue materials and can record invoice information.<sup>93</sup> Richard W. Blood reports on a meeting of Baker and Taylor Automated Buying (BATAB) system users. According to Blood, "Despite the poor documentation of BATAB in the literature, it is, with forty-seven users as of May 1977, the most prevalent automated acquisition system in North America." Users are concerned about linking BATAB with other local systems and/or remote cataloging data bases, utilizing ISBN in the system, expediting summary data for management information, providing foreign currency conversion, etc.<sup>94</sup> The Library of Congress reports that "the final segment of the Library Order Information System (LOIS) is now in operation, completing the four step, machine-assisted processing of orders and invoices for library materials."<sup>95</sup> The four steps include production of purchase orders for books and serials, an in-process list and subscription list, automatic claiming, and machine-produced payment documents.

Relations between libraries and their suppliers was the subject of three articles and one book in 1978. Audrey B. Eaglen criticizes publishers for allegedly giving preferential treatment to booksellers over libraries. She argues that booksellers get better discounts and delivery than libraries and charges that publishers increase costs of obtaining books through poor delivery (e.g., using the U.S. Postal Service) and poor reporting (e.g., OSI) practices.<sup>96</sup> In a later article, Eaglen covers the pros and cons of dealing with a wholesaler and concludes that supporting the "best" wholesaler "will make your book-ordering life easier (not perfect, but easier) and will help to drive some of the bad-dies out of business. . . ."<sup>97</sup> Nancy Buckeye discusses recent trends in relations between libraries and subscription agents. She sees more libraries "using the services of more than one domestic subscription agent." She also reports the disappearance of the nonservice charge invoice and describes the services vendors offer such as catalogs of periodicals, computer-produced price lists, bibliographic updating services, and preprinted labels with the publisher's address and library invoice data.<sup>98</sup> Ung Chon Kim has compiled a second edition of *Policies of Publishers*, which covers addresses for orders, prepayment, discount policy, return policy, shipping and billing policy, back order policy, and standing order plan, if available. This new edition includes more than 500 publishers and should assist librarians when ordering directly from publishers or comparing discounts.<sup>99</sup>

#### *Publishing, Price Trends, and Budgeting*

Some major events of the year 1978 in publishing were the continuing mergers of publishers, implementation of the U.S. Copyright Law,

and two nationwide surveys of reading habits. There were two mergers involving large publishers during the fall: Charles Scribner's Sons merged with Atheneum and Lippincott with Harper & Row. Among the numerous acquisitions were: Prentice-Hall's purchase of Arco Publishing Co., Grosset & Dunlap's purchase of Platt & Munk, Houghton Mifflin's purchase of Parnassus Press, and Elsevier-Dutton's acquisition of the general trade department of Thomas Nelson & Sons.<sup>100</sup> On January 1, the new copyright act took effect, and early in the year there was acrimonious debate between the Special Libraries Association and the Association of American Publishers regarding the guidelines for corporate library photocopying. By the end of the year, the Copyright Clearance Center, supported by publishers, was failing to attract much business. One infringement suit stopped New York's regional school cooperative agencies from systematic reproduction of videotapes on a large scale.<sup>101</sup> A Gallup poll indicated that one-third of the adults in the United States claimed they read one or more books a month.<sup>102</sup> The Book Industry Study Group commissioned a study by the firm of Yankelovich, Skelly, and White on the reading-and book-purchasing habits of Americans. They discovered that 55 percent of the adult population (16 and over) are book readers who have read one or more books in the past six months, and the chief motivation of these readers is pleasure.<sup>103</sup>

International publishing was featured in the literature of the year. Lai-bing Kan gives a detailed account of present day publishing in Hong Kong, including a section on bibliographical control of publications from Hong Kong.<sup>104</sup> One issue of *Library Trends* is devoted to Third World publishing.<sup>105</sup> Articles treat publishing in Africa, Latin America, India, Egypt, and the English-speaking Caribbean. There are also special articles on Third World scholarly publishing and the library and the Third World publisher. Peter Golding writes on the economics of publishing in the Third World where publishing is a depressed industry. The industry is underdeveloped due to the dominance of American and European multinational corporations that export to the Third World.<sup>106</sup> Toivo Roht discusses Canadian publishing and concludes that publishing in Canada is reaching its maturity as it develops an international market. Government support and a new nationalism has given Canadian publishing new confidence.<sup>107</sup> According to G. P. M. Walker, Soviet publishing is reacting more to the demands of readers than in the past, publishing fiction and children's books rather than ideological works.<sup>108</sup> *Publishers Weekly* has also devoted a number of issues to publishing abroad: Portugal, Spain, Japan, and the Soviet Union have been the subjects of special reports. Another publication, *LC Acquisition Trends*, focuses on foreign development in its "publishing and the book trade" and includes reports of LC's representatives overseas in "Acquisitions Travel Abroad." During the year the Library of Congress launched a microfiche program for copying selected titles of Southeast and South Asian publications.

This program will make more copies of limited editions available at a lower cost and will ensure preservation of materials on poor quality paper. The filming is done in New Delhi and shipped to the photo-duplication service in Washington.<sup>109</sup> *Foreign Acquisitions Newsletter*, published by ARL, also includes detailed descriptions of foreign publishing and extensive bibliographies of publications from Africa, the Far East, Latin America, the Middle East, Western and Eastern Europe.<sup>110</sup>

All indications are that the steep inflation of the past year will continue, and devaluation will also remain a problem. In the past year, the ARL libraries spent 10.7 percent more than the previous year, "but the number of volumes added to their collections rose only 0.3 percent and the number of journals and other current serials increased by only 3.5 percent . . ."<sup>111</sup> The Higher Education Price Index, compiled by D. Kent Halstead, National Institute for Education, shows average yearly price increases of "17.5 percent for U.S. periodicals and 11.6 percent for hardcover books" from 1971 to the present.<sup>112</sup> In the public library sector, figures released in 1978 show that a "10 percent smaller slice of the budget is now being spent for materials" than in 1970 because of the reduction in buying power that has occurred since that time.<sup>113</sup> John Dessauer forecasts that "book price inflation will . . . remain ahead of general inflation as it has for several years."<sup>114</sup> Complicating this picture is the devaluation of the dollar. At Yale, the overall cost of materials increased 15.64 percent, taking into account currency devaluation, postage costs, and publisher's prices, but country by country the situation varied widely, even in Western Europe where the inflation in monographs registered a 12.2 percent rise.<sup>115</sup>

Serials prices cause the most severe strain upon collection budgets. Frank Clasquin reports that "in scientific and technical disciplines inflationary pricing is the norm. The average price increase libraries paid for scientific literature is generally twice the percentage it was in 1977."<sup>116</sup> The proceedings of the second Blackwell's Periodicals Conference, held in March 1977, deal with the economics of serial management and include papers on publishing and distribution of periodicals, balancing the library budget, and cooperation. One librarian comments: "Experience suggests that the scientist will attach great importance to current periodicals; and many teaching in the fields of chemistry and physics will not hesitate to see 80 percent of the budget spent on serials."<sup>117</sup> Brown and Clasquin agree that scientific journals are the most expensive, particularly chemistry and physics, and have the highest inflation rate. The cost of scientific periodicals and serials continues to threaten "the ability of many academic libraries to purchase not only scientific journals, but scientific abstracting services, treatises, and books also, as well as books and journals for all non-scientific subjects."<sup>118</sup> The remedy is in reduction, subsidy, or cooperation, or better yet a combination of these approaches.

The Library Materials Price Index Committee, Resources Section, RTSD, ALA, (LMPIC) attempts to keep librarians informed about the price changes in library materials. As Noreen G. Alldredge reminds librarians, the "indexes . . . record *prices* not costs."<sup>119</sup> Helen Welch Tuttle describes this committee and its work from 1957 to the present and notes unsuccessful attempts to construct indexes for audiovisual materials.<sup>120</sup> In 1978 David B. Walch introduced a Non-Print Media Index for the first time at the ACRL Boston meeting, and the committee has already contacted him about its continuation.<sup>121</sup> Other efforts to improve price reporting, supplement the index, or derive local data were also reported during the past year. Frank Clasquin is working on the development of a core list of periodicals to improve price reporting.<sup>122</sup> Glyn T. Evans gives an overview of the factors that impact acquisition budgets, sources of information on acquisitions, and the costs of not having information on acquisition budgets.<sup>123</sup> He goes on to describe the management information system being developed at SUNY, which was outlined earlier in this article. The annual British academic price index, which supplements the LMPIC indexes, was released in 1978, and shows that the "price of British academic books has more than doubled over the past three years."<sup>124</sup> Waltner, King, and Horner compare and contrast a local periodical study with Clasquin's annual periodical price survey.<sup>125</sup>

As in 1977, concern on the part of libraries about inflationary increases in 1978 resulted in a large number of documents on budgetary planning. Murray S. Martin describes the processes related to the library materials budget: setting it up, revising it, monitoring it, and closing it out.<sup>126</sup> Martin believes that the library materials budget is the hardest part of the budget to monitor because of its diverse expenditures. Following a study on the materials budgeting process at twelve private university libraries, Frederick C. Lynden concludes that librarians must prepare more precise expenditure data for short- and long-range planning, improve communications with their administration, exploit external fund raising, and encourage more effective resource sharing.<sup>127</sup> Looking at library budgeting from a historical point of view, Arthur T. Hamlin indicates that "the expansion of higher education, which brought the recent great increases in university support, has long since disappeared and there is no hope of similar expansion in the near future."<sup>128</sup> He foresees that a reduction of university support combined with inflation in publishing and increasing labor costs will result in libraries receiving a shrinking proportion of university resources. As libraries move into a future marked by increased use of computer data services, microforms, and shared computer data bases, Richard L. Van Horn suggests libraries join with the computation center, publications and printing services, and audiovisual services on campus to form an information resources center. This will cut down administrative costs and allow university administrations to give greater support to library functions. He also suggests

that libraries can benefit more from better systems planning and a greater awareness of the information needs of faculty, students, and administration.<sup>129</sup> Fiscal constraints have caused some institutions to use zero-based budgeting (ZBB), a system that "analyzes all proposed expenditures rather than . . . increases above current expenditure levels."<sup>130</sup> Parker and Carpenter describe a ZBB analysis of collection development activities at SUNY Buffalo. As a result of their efforts, the library now has useful data for short- and long-range planning, and through the detailed review of operations has been able to achieve certain economies.<sup>131</sup>

Four resource articles of 1978 are concerned with allocation of materials funds. Jasper Schad examines the history of allocations in colleges and universities and concludes that allocation is a collection development problem, that formulas are useful as adjuncts to the process of allocations, that it is better to divide funds among fields of knowledge than departments, and that a knowledge of the strengths and weaknesses of the collection and the availability of materials are key considerations in the entire process.<sup>132</sup> Thomas J. Pierce reports a formula for allocations, based upon total number of majors in a department, size of departmental collection, total departmental library use and a departmental hard/soft index. He points out that his formula can only be used as an aid in the allocation process, since "the subjectivity of the book budgeting process . . . is still very much evident. . . ."<sup>133</sup> Gary S. Sampson describes an allocation method that assigns a proportion of "library resource units" (one monograph, one serial subscription, or a comparable microform unit) to departments instead of line-item amounts of money. The maintenance of departmental allocations depends upon prediction of unit costs, e.g., the average price of a biology book or a biology serial.<sup>134</sup> Johnson and Rutstein report on the politics of book fund allocation at Colorado State University. When budget cuts were made there, the faculty insisted that the library prepare an allocation formula. The departments have continued to argue over the advantages and disadvantages of this formula and have made numerous changes to the formula, including adoption of a contingency fund. The authors conclude that "allocation of the book budgets is one of the most political problems libraries have within the context of the university setting."<sup>135</sup>

Mathematical models have also been developed to predict book fund expenditures and analyze the purchasing power of library acquisition budgets. Tim Sauer reports on a mathematical formula devised to predict the amount of money that will be spent on monographs with a book acquisition system. The formula is based upon the history of receipt of orders in the past and could be incorporated in a computer-ordering system.<sup>136</sup> Ronald E. Wyllys shows librarians how to calculate library expenditures in terms of actual purchasing power, using figures from the Wholesale Price Index and Consumer Price Index. Wyllys also makes available a formula for correcting Miriam

Drake's figures (1977) on the growth rate of academic libraries.<sup>137</sup> These mathematical models, the new suggestions for allocations, and the increasing data on materials expenditures are all signs that librarians are attempting to gather quantifiable information that will aid in more effective allocations of scarce resources.

### *Collection Funding*

The drab economic picture for collection funding was brightened somewhat in 1978 by state and federal aid. The U.S. Office of Education (USOE) distributed nearly \$10 million in Title IIA grants to support collection building in postsecondary educational institutions. As reported earlier in this paper, the USOE also awarded \$5 million to twenty major research libraries for strengthening research library resources. The National Endowment for the Humanities also provided support for collections. The Dallas Public Library received an "NEH challenge grant" to stock its new main library and Chicago Public Library received \$438,016 in LSCA (Library Services and Construction Act) for book buying.<sup>138</sup> NEH grants also went for materials for a performing arts library at the John F. Kennedy Center for the Performing Arts, acquisitions for the Arthur and Elizabeth Schlesinger Library at Radcliffe College, and acquisitions at the Frances Loeb Library at the Graduate School of Design at Harvard. Other NEH grants in 1977/78, totalling \$5.6 million, emphasize making work in the humanities available through finding aids, cataloging projects, microfilming, and public lectures and exhibits.<sup>139</sup> More state money was also made available for library collections during the past year. The state of Louisiana granted \$1,516,213 in state funds to parish libraries exclusively for materials.<sup>140</sup> West Virginia increased its support for books in public libraries by 225 percent<sup>141</sup> and Alabama voted \$5 per student for school library materials.<sup>142</sup>

Despite these federal and state grants, the events of 1978 have made librarians increasingly worried about decreasing governmental support for libraries. A taxpayer's revolt was begun in California last year with passage of the Jarvis/Gann bill, which reduced property taxes to a minimum level and drastically cut support for county and city libraries. The damage to public libraries is now estimated to be: "operating revenue down 17 percent from normal; service hours, down 22 percent; acquisition funds, down 20 percent; and staff, down 21 percent."<sup>143</sup> One by-product of the reaction to these reductions was an increasing visibility of libraries and a new effort on the part of librarians to seek outside funding for libraries. Two publications issued in 1978 will be very useful in this endeavor. *Federal Programs for Libraries*, a directory compiled by Leonard and Erteschik, includes a bibliography of library funding sources as well as a detailed description of U.S. programs with purpose, eligibility requirements, grant type, obligation (i.e., dollars for each fiscal year), range and average amount of grants, application source, and closing date.<sup>144</sup> Another useful

compilation is ARL's flyer on external fund raising, which notes that many libraries are designating a staff member in the library to do fund raising, and that there is a trend in ARL libraries toward expanding efforts to supplement appropriated funds.<sup>145</sup>

The outlook for collection funding is not encouraging. The ARL SPEC flyer confirms a concern of some research library directors that large foundations are no longer giving money for individual library research programs. Instead, foundations are spending grant monies on national-level cooperative and research programs. As a result, library fund raisers are looking more to local sources of funds: alumni, business firms, individual donors, and smaller foundations. Many institutions now include a library component in their general capital fund-raising drives, but results of these efforts have sometimes been disappointing. For example, in a \$125 million capital fund-raising drive at Princeton, the library attained \$6.5 of \$13 million sought for general endowment and received \$1 million for immediate purchases against a goal of \$2 million.<sup>146</sup> In other words, only half of the goals were realized in either case. At Princeton, the Priorities Committee, a faculty committee that approves the annual budget, stated: "Budgetary problems are likely to get worse over the next few years, and we think considerable changes may have to be made in some major components of the budget."<sup>147</sup> Given these circumstances libraries will be forced to increase interlibrary borrowing, cooperative acquisitions, cooperative storage, and resource sharing.

#### *Continuing Education*

In 1978 another new resources publication, *Collection Building: Studies in the Development and Effective Use of Library Resources*, appeared. This periodical, which is published three times a year, is aimed at resource librarians in small and medium-sized libraries. It will include bibliographical essays for selectors, a section on free and inexpensive material, and studies on various aspects of collection development. This journal is the fourth publication devoted to the topic of acquisitions and collection development to appear in the last three years. The ARL SPEC Kits and Flyers have also covered a high proportion of resource topics in the last two years. Of the nineteen kits and flyers issued over the past two years, eleven have dealt with resources directly or indirectly (seven directly and four indirectly). This emphasis in the ARL publications is another indication of the demand for management information in this area of librarianship. In 1978, the Council on Library Resources began a program of focused fellowships, and the topic for 1979/80 is concerned with library-publisher relations. The council will select five fellows who will explore various aspects of the relations between libraries and publishers. The council suggested that possible topics might be "an analysis of trends in publishing as related to trends in acquisitions; prospects for on-demand publication and its implications for libraries; the effects of a cen-

tralized interlibrary loan facility on journal subscriptions; changes in public library acquisition patterns, etc."<sup>148</sup> It is evident that the body of specialized literature relating to resources is growing.

The 1978 ALA Annual Conference in Chicago included a program on automated acquisitions, which was discussed earlier in this paper. At the Bookdealer Library Relations (BDLR) committee meeting there were reports on the proposed ANSI Z-39 standards for a single-title order form and standard identification codes for vendors and libraries. It was also announced that the BDLR committee plans to work with the Bookseller's Discussion Group "in preparing a list of standard definitions of publishers' reporting terminology."<sup>149</sup> Other announcements concerned the availability of standards on publishing statistics, and the reduced price membership offer of the Book Industry Study Group to not-for-profit libraries. At both the summer and midwinter meetings of the Acquisition Discussion group a reporter from *Library Acquisitions: Practice and Theory* recorded the sessions.<sup>150,151</sup> There were discussions of o.p. procurement, coping with a bid system when ordering books, standard order forms, shipping problems, foreign exchange agreements, and approval plans. At several meetings there were statements about the 1980 Acquisitions Preconference, which will examine issues facing librarians in the 1980s such as networks, shortened dollars, and teleordering.

Three workshops held in 1978 were specifically devoted to improving the management skills of collection development librarians. The ARL Office of Management Studies conducted a workshop for Japanese studies librarians in August, including sessions on Japanese collections, resources in Japan, and resource sharing. Two more workshops, which described the methodology and impact of the ARL Collection Analysis Project, were held at Arizona State and M.I.T. respectively. As part of the second phase of CAP, consultants from M.I.T. and Arizona State will periodically advise these libraries. To further the education of librarians in collection management, the Collection Development Committee of the Resources Section of RTSD proposed at its summer meeting the sponsoring of a series of regional collection development institutes. In November at the Boston meeting of the Association of College and Research Libraries, there were excellent papers delivered on resource topics, which have been covered in this survey of the 1978 literature.

The ARL Systems and Procedures Exchange Center produced three SPEC kits in 1978 on resource topics: collection assessment, resource sharing, and automated acquisition systems. The automated acquisitions kit was described earlier in this paper. According to the resource-sharing flyer, the major concerns in this area are: faculty resistance to resource sharing, demand for strong local collections, and costs that outweigh benefits. "Responses indicate that the most effective arrangements seem to occur among libraries of similar size and mission which are geographically close."<sup>152</sup> The kit contains selected

portions of reports on cooperation in the University of California Library system, the New York Public Library and area libraries, the Cleveland Area Metropolitan Library System, the Cleveland Area Interlibrary Network, Boston Library Consortium, Research Libraries Group, and other ventures. The collection assessment flyer describes the various approaches to collection evaluation in ARL libraries. The evaluations usually begin with a collection description and the actual assessment is either collection centered or client centered, i.e., checking collections with bibliographies or performing user surveys. "There is considerable interest among ARL libraries in building collection assessment into regular operations."<sup>153</sup>

A discussion of the degree to which library schools are preparing their graduates for work in acquisitions took place at the ALA Annual Conference. It will come as no surprise that four speakers, William J. Myrick, Nancy J. Williamson, Sara Heitshu, and Judith Serebnick, were discouraged by the lack of formal programs on acquisitions in library schools. Sara Heitshu sees signs of improvement with the development of intern programs and conferences, national and regional programs on acquisitions, and personal efforts of acquisitions librarians (University of Michigan), who are organizing educational programs. As examples of local efforts, she cites PAIN (Philadelphia Acquisitions Information Network) and PLAIN (Piedmont Library Acquisitions Information Network), each of which provide area acquisitions librarians with continuing education through outside speakers and local interchange of ideas.<sup>154</sup> PLAIN distributes a newsletter carrying reports of its group activities. In 1978, *American Libraries* carried articles on small presses, remainder books, book wholesaling, and the language of the marketplace. Edith McCormick describes how and where small press titles are reviewed, and includes a list of "major national and regional distributors for small presses."<sup>155</sup> C. Edward Wall reports on the remainder business, lists some typical remainder houses, and indicates how librarians can obtain remainders.<sup>156</sup> Susan Spaeth Cherry introduces librarians to the business of book wholesaling through a verbal tour of the Baker and Taylor Warehouse in Momence, Illinois.<sup>157</sup> To improve communications in acquisitions Scott R. Bullard provides librarians a brief glossary of the terms used in book ordering.<sup>158</sup>

### *Conclusion*

As financial resources for building collections diminish, collection development and acquisitions librarians are putting more effort into measurement, analysis, and planning. There was a striking increase in the number of user surveys in the literature of 1978 as resource librarians attempted to discover the needs of their clientele. Statistical models, questionnaires, and forms were published describing how libraries have evaluated subject collections, vendors, searching performance, periodical holdings, and other facets of collection building.

Analysis of collections or procedures now include quantitative data based upon objective questions: Do students cite books or periodicals in engineering dissertations? Are patrons using more current or retrospective publications? How many claims were made to dealer X, and how many reports were received from dealer X, and how many titles were involved in total in these transactions? Is this serial title indexed, abstracted, or analyzed? Planning proceeds from the answers to these questions. The technical development plan for the National Periodicals Center is a planning document for national resource sharing that uses mathematical models for request distribution and demand intensity, as well as cost projections for back files and current subscriptions. Both long- and short-term planning is now based upon objective criteria that have been established through careful measurement and analysis. Collection development (or acquisition) librarians are becoming collection (or resource) managers who are aware of and concerned about factors such as trends in publishing, local funding, user needs, collection strengths and weaknesses, and local, regional, and national cooperation. They are attempting to make the most effective use of limited funds by examining possible alternatives. The literature of 1978 provides many examples of resource librarians using quantitative data and scientific methodology to define the problem and determine the solution.

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# Year's Work in Cataloging and Classification: 1978

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THE DECEMBER 1978 PUBLICATION OF THE *Anglo-American Cataloguing Rules*, second edition (AACR 2), was a pivotal point around which many of the year's cataloging activities turned.<sup>1</sup> The sequence of events attending development of AACR 2, which began in 1974 and involved five authoring bodies representing Canada, the United Kingdom, and the United States, was outlined by Kelm.<sup>2</sup>

Gorman has provided a summary of the aims, structure, and content of AACR 2.<sup>3</sup> The stated aims of the Joint Steering Committee for the Revision of AACR (JSC) were: (1) to incorporate already agreed revisions to AACR 1; (2) to harmonize the British and North American texts; (3) to incorporate international standards and agreements; (4) to take into account developments in library automation; and (5) to incorporate changes arising from proposals put forth by groups and individuals during the revision process. AACR 2 is structured in two parts, the first for bibliographic description and the second for choice and form of access points. Where possible, for example in Part I, rules have been numbered mnemonically from one chapter to the next. The possibility of short, medium, and long descriptions similar to Cutter's original idea was revived, and the ISBD(G) and other ISBDs available became the basis of description for all types of materials. Increased stringency in the use of corporate main entries and elimination of a separate rule for serials were cited as important changes, and more examples relating to women and to nonprint materials were included. The differences between AACR 1 and AACR 2 that will be most significant to staff and patrons of public libraries are set forth by Tucker, who bases his statements on decisions made by the Library of Congress (LC) relative to optional and alternative rules and LC recommendations that will cause AACR 2 to be implemented with some modifications.<sup>4</sup>

Optional and alternative rules are an important feature of the new code; and the Library of Congress, with input from LC staff and interested librarians elsewhere, and from discussions held with the na-

tional libraries of Australia, Canada, and the United Kingdom, has announced its position on a number of them.<sup>5</sup> The General Material Designation (GMD) is slated for inclusion in all machine-readable records, but LC suggested continuation of the status quo for displaying GMDs, i.e., displaying them only for the materials presently cataloged under AACR 1 chapters 12, "Audiovisual Media and Special Instructional Material," and 14, "Sound Recordings," with one addition, that of "microform." Comments were sought on this proposal.

Among the decisions on Part II options, the alternative rule, 22.3C2, for romanization of names of persons entered under surname will be applied so that a romanized form of name which has become well established will be used rather than systematic romanization where the two differ. The addition of full form of name to names represented by initials and the addition of birthdates and death dates to a person's name, even if there is no need to distinguish between headings, both will be applied by the Library of Congress in cases where the necessary information is readily available. This varies from the plans of the National Library of Canada (NLC) and the British Library. Names of corporate bodies appearing in different languages will be established in the official language of the body, rather than the alternative language suitable to the users of the catalog because of the difficulty for national cataloging agencies of tailoring their records to fit a particular class of users.

Responses received by the Library of Congress to a query on display of uniform titles showed that a clear majority (80 percent) of those expressing views favored the display of all uniform titles when AACR 2 is implemented.<sup>6</sup> A summary of the AACR 2 provisions relating to the chapters on form of heading, primarily as these provisions differ from AACR 1, was provided by LC, including sections on background, organization, options, and differences for each chapter.<sup>7</sup> An overview was also presented, including historical development and more general matters of style and structure.<sup>8</sup>

Although the goal of a single text for Britain and North America was achieved in AACR 2, concern has been expressed that LC's plans to depart from a number of provisions of the new code will cause a continuation of the problems presented by past practices of superimposition.<sup>9</sup> The LC implementation plan, designed to reduce costs for the Library of Congress and the library community at large, calls for some minor departures from AACR 2, such as continued use of the abbreviation *Dept.*<sup>10</sup> Some more significant diversions are also planned, however, including a list of eighteen changes that, although desirable, will not affect filing arrangement and user access and therefore will not be made.

Pressure from the American library community was largely responsible for the AACR 2 exceptions planned by LC. Following LC's initial estimate that 49 percent of the records in the existing MARC data base would have headings that are not valid under AACR 2,<sup>11</sup> Kilgour

expressed concern about cost-effectiveness of adoption of the new code,<sup>12</sup> and the Canadian Association of Research Libraries passed a resolution requesting a study of the costs of implementation.<sup>13</sup> ALA's Library and Information Technology Association (LITA) passed a resolution for delay of adoption of AACR 2, citing costs as a primary concern.<sup>14</sup> Welsh pointed to the need for an authoritative and representative body to deal with the concerns being expressed, while Hickey asserted that the library community had been informed of progress on the new code and input had been sought throughout the revision process.<sup>15</sup> The editors of AACR 2 also noted the efforts that had been made to ensure that all views were heard.<sup>16</sup>

The Board of Directors of ALA's Resources and Technical Services Division (RTSD) considered several options for the organizational structure for ongoing catalog code maintenance and polled the RTSD members on their preferences.<sup>17</sup> Following an open hearing at the ALA Annual Conference, it was voted to return responsibility for future catalog code revision to the Cataloging and Classification Section's Descriptive Cataloging Committee (CCS DCC), with the specification that its function statement should be revised and provision made for nonvoting representation from interested ALA and non-ALA units.<sup>18</sup>

At an August 3 meeting at ALA headquarters, twenty-one representatives of fifteen library organizations resolved unanimously that LC delay adoption of the new code until January 1, 1981.<sup>19</sup> It was recommended also that a monitoring group or clearinghouse be established to gather information on AACR 2 studies being done; the ad hoc Committee on AACR 2 Implementation Studies was appointed in December.<sup>20</sup> It was later announced that NLC and the British Library were also postponing adoption of AACR 2.<sup>21</sup>

Reaction to the decisions to modify and delay implementation of the code was not entirely positive. Cathro felt that these decisions, taken before the rules had even been published, would undermine the authority of AACR 2.<sup>22</sup> He cited addition of an extra year of non-AACR 2 records to the MARC data base as a negative cost factor in the delay and predicted detrimental effects of these decisions upon international cooperation. Gorman denounced the planned departures from AACR 2 and encouraged adoption of a single cataloging standard, AACR 2, as the only way to achieve the goals of efficiency, progress, and reader service and to eliminate the contradictions now existing in large catalogs.<sup>23</sup>

While pointing out the perils of delay, Thompson offered a list of ten projects that he felt could be undertaken cooperatively to facilitate the many changes slated for 1981.<sup>24</sup> The majority of his suggestions related to automation of the catalog, highlighting the interrelationship of AACR 2, the freezing of card catalogs, and the trend toward new formats for the catalog of the future.

Martin raised several questions to consider in relation to the vast machine-readable bibliographic systems developed over the past dec-

ade: (1) should old MARC records be changed to reflect AACR 2 forms of heading? (2) will the consequent discrepancies between on-line and card catalogs cause problems? (3) how should on-line files deal with the proposed treatment of serials titles, where nondistinctive words will form the main entry? and (4) what kind of authority links should be created between old and new catalogs, and how much of this linking can be done automatically?<sup>25</sup>

### *The Future of the Catalog*

The freezing of old catalogs and the beginning of new was topic for two major meetings during 1978. The first, on January 24, was a hearing sponsored by ALA's Reference and Adult Services Division (RASD) on closing the Library of Congress catalog.<sup>26</sup> LC staff members delineated background, the current state of planning, and issues still to be decided in anticipation of the freeze. A document entitled "Freezing the Library of Congress Catalog," used as the basis for the presentations, outlined eight areas of consideration: automated system, automated systems for nonroman scripts, descriptive cataloging problems, subject heading system, shelflist system, serials, linking new catalog with old, and upkeep and ultimate treatment of the old catalog.<sup>27</sup> This information was updated in July,<sup>28</sup> at the time that LC announced establishment of a Reference/Processing Work Group on the Future of the Catalogs to facilitate communication between reference and processing staff.<sup>29</sup> Kohl encouraged public service librarians in all settings to make their views known and contribute to the radical restructuring of the catalog.<sup>30</sup>

The second major meeting, LITA's Institute on Closing the Catalog, was of broader scope. It was held in November in New Orleans and attended by nearly 400 librarians.<sup>31</sup> Keynote speaker Paul Fasana concluded that large libraries have little choice but to close their catalogs, faced as they are with LC's closing, AACR 2, and internal automation. Berman, on the other hand, suggested that public and school libraries rework their old catalogs rather than begin new ones. Atherton urged those who are planning new catalogs to look at heretofore unheeded research findings and redesign earlier studies for future replication with book and COM catalogs. Gorman offered cooperation as the answer to cost constraints in automation and Lorenz urged development of a standard methodology for comparison of costs involved in different catalog formats. Kilgour cited the need for uniformity in cataloging rules used and bibliographic records provided by all OCLC libraries, and Rather and Freedman stressed the importance of authority control. Rosenthal spoke to planning issues, recommending heavy staff involvement from all levels and areas, while Weiss urged that the planning team include staff who have the respect of their colleagues. She emphasized three central issues: patron use of the system in various stages of development, realistic expectations for the system and for staff, and priorities along the road to an on-line catalog. At-

kinson predicted that automation of files will result in changes in library organization because processes will no longer be tied to physical file locations.

The degree of concern with catalog closing and alternative formats was reflected in the appearance of, and enthusiastic response to, a new microfiche publication, *Alternative Catalog Newsletter*, which is intended as an informal medium of communication for those who are interested in questions relating to the closing of card catalogs and the development of alternatives to card catalogs.<sup>32</sup> It includes the full text of selected reports, articles, and other planning documents that cannot be distributed as rapidly and economically through other channels and a cumulating bibliography that is reprinted periodically. Beginning in May, it appeared on a monthly basis through the remainder of 1978.

Other evidence of the need for communication on issues concerning the future of the catalog was a petition for the formation, within ALA's Association of College and Research Libraries (ACRL), of an ad hoc discussion group on alternatives to the card catalog in research libraries.<sup>33</sup>

The likely impact of LC's catalog closing and adoption of AACR 2 and the nineteenth edition of the *Dewey Decimal Classification* (DDC) on small and medium-sized public and school libraries was addressed by Marshall, who felt the best course of action would be to apply the new standards at the same time that LC does.<sup>34</sup> She noted several positive effects of AACR 2, including use of title page author as main entry rather than as a cross-reference, and pointed out that smaller libraries have larger turnover in their collections so they will be able to look forward to a time when the old catalog is phased out. Scilken felt that only a flexible on-line catalog would be a viable alternative to the card catalog, because of the inability of book and COM catalogs to include the most recent material—which is the most frequently sought,<sup>35</sup> and Dwyer outlined a survey which disclosed that more than a third of the respondents did not use the microfiche supplement to the card catalog, even after a year of operating under a dual catalog system in an academic library.<sup>36</sup> These respondents also expressed the most dissatisfaction with the catalog, contributing to Dwyer's belief in a single catalog as the best response to user needs.

The problems inherent in planning for a transition from traditional card catalogs to other catalog forms were discussed by Rosenthal, who outlined a planning approach in some detail, giving specific questions that should be addressed.<sup>37</sup> He focused on the decision-making process and on identifying information that must be known by management before new designs for a catalog can be implemented. Butler, Aveney, and Scholz provided a summary of resources available to local libraries considering automating and a guide through the cumulative experience of a number of libraries that have converted their catalogs.<sup>38</sup> Their report is divided into four parts that deal re-

spectively with the nature and meaning of the concept of machine-readable data bases; the evaluation criteria required to examine data bases, vendor products, and conversion approaches; the various conversion approaches available; and the capabilities and limitations of the major vendors and their data base systems.

The Association of Research Libraries (ARL) offered two items on the future of catalogs, one emphasizing administrative problems relating to alternative methods of bibliographic control and access, and the other intended as a working document to aid librarians in local planning.<sup>39</sup>

Reports of conversion activities at the University of California, Berkeley, and McMaster University also became available.<sup>40</sup>

The library applications of computer output microfilm (COM) were the subject of a volume by Saffady, who described the latest developments in equipment, software, applications, and systems design.<sup>41</sup> Diaz included several case studies in his reader on microforms and library catalogs, stressing application rather than theoretical aspects.<sup>42</sup> COM was also the subject of a workshop cosponsored by the RASD Catalog Use Committee and the RTSD Cataloging and Classification Section,<sup>43</sup> and RASD released *Commercial COM Catalogs: How to Choose—When to Buy*, including a buyer's outline of commercial COM catalog issues, a survey of current commercial COM catalog users, and a bibliography.<sup>44</sup> Data on patron use of COM catalogs was provided by Butler, West, and Aveney.<sup>45</sup> Houston Public Library planned eighty stations for its COM catalog, to include conversion of its entire 325,000-title film card catalog,<sup>46</sup> while Western Kentucky University reported plans to double the number of COM stations and to halve the number of fiche in each unit by adopting a 78× reduction ratio.<sup>47</sup> A description of the conversion project and the catalog format is presented.<sup>48</sup> The Public Library of Columbus and Franklin County, Ohio, offered to rent its own data base to other libraries wishing to convert to COM,<sup>49</sup> and Baker and Taylor began to offer its services for conversion of catalog cards to microfilm or microfiche with weekly updates.<sup>50</sup> Spaulding suggested an alternative formatting of fiche catalogs, for which hardware has recently been developed.<sup>51</sup> It would consist of a scroll of film 105 millimeters wide and up to 200 feet long, i.e., a very long microfiche, which would allow a searcher to move a relatively short distance along the length of the film until internal indexing indicated the proper column had been reached. At this point the searcher would move the film sideways.

RTSD Book Catalogs Committee members felt there was a continuing need for the committee's existence, with clearinghouse activities being suggested as a valuable function to be served.<sup>52</sup> Use of a computer-produced book catalog to permit easy user access to an uncataloged serials collection was reported.<sup>53</sup>

The catalog conversion approach used by Blackwell North America and Dataphase for the Tacoma Public Library and now available

commercially was described.<sup>54</sup> SWALCAP, a cooperative approach to computerization centered in Bristol, includes a cataloging system that embodies facilities for the creation and maintenance of a machine-readable bibliographic file for each user, together with the production of catalog output in a variety of forms.<sup>55</sup> Horny described NOTIS-3 (Northwestern On-Line Total Integrated System) with particular attention to technical services aspects;<sup>56</sup> internal applications and relevance to projected national networking developments were considered. Furlong discussed the NOTIS-3 on-line field index access, which was noted as a powerful improvement upon search key access to on-line records and a viable alternative to full keyword access.<sup>57</sup> The automated system developed for cataloging materials received by the Copyright Office was reviewed and some of the problems in disseminating this unique data base through national networks were considered by Pullmann.<sup>58</sup>

It was announced that the system being developed for the Ocean County Library is planned to include a cataloging system that will not rely on any large system such as OCLC but will be created locally from Cataloging in Publication (CIP) and other sources.<sup>59</sup> An integrated system developed for the University of Lausanne Libraries was described as utilizing catalog entries taken directly from INTERMARC and having the capability to produce cards, lists, and catalogs by author, title, and subject heading.<sup>60</sup>

Themes for meetings of the regional groups affiliated with RTSD held during the year showed far-reaching concern over adoption of AACR 2 and the closing of LC's catalogs.<sup>61</sup> ALA's AACR 2 Introductory Program Committee finalized plans for a Dallas preconference including a package of videotapes and graphics suitable for repeated use with regional or specialized groups.<sup>62</sup> Amid the earnest and serious planning and discussion surrounding catalog closing, Mathews presented a tongue-in-cheek view of the events at LC,<sup>63</sup> and Likens asked for a moratorium on library meetings on closing the catalog.<sup>64</sup> Reminders of the roots of many cataloging theories and practices were provided by two additions to the Heritage of Librarianship series. Miksa presented a view of Charles Ammi Cutter,<sup>65</sup> while Vann treated Dewey.<sup>66</sup> Certain of Dewey's observations are uncannily pertinent to the past year's central issues and controversies: "Certain restless spirits will always be clamoring for change, and unless care is exercised will destroy much of the symmetry and consistency of the older work and all hope of uniformity. No librarian with much respect for his catalog will consent to continual changes in his rules, even if he is anxious to keep in harmony with ALA committees, library schools, and the practice of printed cards."

#### *Specialist Interests*

Much attention was given to the organization and the description of materials in nontraditional formats and in specialized subject areas.

An adapted LC classification developed for children's materials at the Inglewood (California) Public Library was described by Perkins.<sup>67</sup> The system, utilizing a two-letter classification, followed by one or two numbers when more detail is required, has received favorable response from children's librarians during its five years of use.

Wepsiec analyzed the relationship between LC subject headings in the discipline of anthropology, revealing a faulty structure with reference to levels of generalization.<sup>68</sup> Specific problems were cited and solutions suggested. Clack examined the adequacy of LC subject headings for black literature, using as criterion the degree to which headings are coextensive with the subject of the work.<sup>69</sup> She concluded that degree of adequacy varied and suggested that prescriptive measures be taken. Creation by the Library of Congress of new subject headings to provide specificity reflecting topic and race association was recommended, and further research was called for.

The organization of a geophysical data collection was described by Davis and Haymes,<sup>70</sup> and a comparative analysis of the Dewey Decimal Classification, the Bliss Bibliographic Classification (BBC), and the Library of Congress Classification for the field of agricultural soil science was provided by Nocetti, including creation of a new structure incorporating elements of all three systems.<sup>71</sup>

Subject headings for use by synagogue and church libraries were listed by Kersten,<sup>72</sup> while Smith provided a new manual on organization of the congregation library.<sup>73</sup>

Adequacy of the OCLC data base for a special library was studied, revealing that 65 percent of its recent acquisitions had already been cataloged.<sup>74</sup> This finding suggested to Davis and Dingle-Cliff that technical information centers and special libraries could benefit from OCLC participation.

The bibliographic disarray in the field of state documents was attributed by Rather to the lack of cooperation in creation of records and to the lack of nationally accessible authority files, and Trezza suggested a pilot project to develop a program of cooperative cataloging and input be established between the Library of Congress and one or two sample states that have active and state-funded library authorities.<sup>75</sup> Failure of a recent shared cataloging project in which participating government agencies were to have cataloged their own publications for use in the *Monthly Catalog* was said by Greenberg to be due to several factors: a large part of the coordination fell to the Government Printing Office (GPO), which felt its role as both participant and coordinator was awkward; the standards for cataloging used in some agency libraries were not up to GPO standards; and, the flow of cataloging never reached the expected goal.<sup>76</sup> The Documents Cataloging Manual Committee of ALA's Government Documents Roundtable (GODORT) began the work of analyzing AACR 2 provisions as they apply to government documents.<sup>77</sup> The proceedings of the Preparatory Workshop on African Government Documents were

published,<sup>78</sup> and Johansson addressed the problems and prospects of bibliographic control of official publications in the United Kingdom.<sup>79</sup>

Law librarians focused on three issues: comparison of the COM catalog with the card catalog; the practical effects on technical services of the freezing of LC's catalog, AACR 2, and revised subject headings; and several aspects of serials automation.<sup>80</sup> Discussions of cataloging and classification of legal materials were provided by Moys, including an original classification scheme as well as several already extant.<sup>81</sup>

Among topics discussed at meetings of the Music Library Association were the status of and implementation plans for AACR 2, liaison between American and British music librarians to discuss cataloging matters, and the effect of the impending LC catalog freeze upon music subject headings.<sup>82</sup> The Library of Congress announced its intent to abandon the use of multiple physical descriptions to represent in one bibliographic record sound recordings issued in more than one medium, e.g., disc and tape.<sup>83</sup> In the future, a separate record will be prepared for each physical form of a single item, with other existing forms, if known at the time of cataloging, mentioned in a note. Redfern considered the treatment of music in fifteen general or special classifications.<sup>84</sup>

The RTSD/LITA/RASD Committee on Representation in Machine-Readable Form of Bibliographic Information (MARBI) considered LC proposals on analytics and MARC formats for journal articles and technical reports.<sup>85</sup> A general discussion of analytical access is presented by Hyman,<sup>86</sup> while the American Society for Information Science produced a revision of the standard for descriptive cataloging of scientific and technical reports originally prepared by the Committee on Scientific and Technical Information (COSATI).<sup>87</sup> Cataloging, abstracting, and indexing of unpublished reports is given considerable attention by Holloway, Ridler, Fuccillo, Wilson, and Yates.<sup>88</sup>

The RTSD CCS Cataloging of Children's Materials Committee met with representatives of the major commercial catalog card services to discuss the need for simplified cards for children's materials for use in school and children's collections and reaffirmed an earlier position in favor of inclusion of functional designator after names used as added entries for children's materials.<sup>89</sup> Illustrator was cited as being especially important because the illustrator often equals or exceeds the author in significance in children's literature.

The ad hoc Subcommittee on Descriptive Cataloging of Asian and African Materials submitted its final report to the RTSD CCS Descriptive Cataloging Committee with the central recommendation that a single standing committee be established within the Cataloging and Classification Section to study both descriptive and subject cataloging of Asian and African materials.<sup>90</sup> Okell and Herbert set out a number of recommendations on Burmese name cataloging that vary from AACR and IFLA's *Names of Persons*, both of which are criticized for inconsistencies.<sup>91</sup>

The RTSD Resources Section Micropublishing Committee and the Reproduction of Library Materials Section Standards Committee approved a joint resolution opposing the proposed AACR 2 rule on the cataloging of microform reproductions of previously published works that associates the microform imprint with the title and relegates the imprint and other bibliographic data of the original publication to a note.<sup>92</sup> The Processing Department of the Library of Congress studied machine access points for microforms, concluding that it would be more logical to accommodate the data elements peculiar to microforms within the existing MARC formats than to try to develop a new format specifically for microforms.<sup>93</sup> It was noted that these data elements may appear in the collation or in a note; at issue was the necessity to include them in a way that they could be utilized in searching. Eleven elements were listed with comments of an ad hoc committee of senior cataloging and machine systems specialists. Myrick surveyed past activities in the area of bibliographic control of microforms and listed recommendations resulting from a special meeting of the Micropublishing Committee's Subcommittee on Bibliographic Control of Microforms that included representatives from LC, ARL, the Council on Library Resources (CLR), and other key organizations.<sup>94</sup> Saffady offered a work intended as a "systematic presentation of the basic facets of micrographics as applied to library work" for the library school student and the practicing librarian.<sup>95</sup>

Cataloging, classification, and indexing of nonbook materials were explored by Fothergill and Butchart, who support the use of standard cataloging principles as they are employed for books and highlight some differences between book and nonbook cataloging.<sup>96</sup> Fairfax, Durham, and Wilson presented the findings of a feasibility study undertaken for the British Library and the Council for Educational Technology to investigate the need for a national cataloging and information service for audiovisual materials.<sup>97</sup> The importance of a comprehensive and detailed system for acquiring, processing, and distributing information on nonbook materials in a standardized format was affirmed.

The British Library announced establishment of an audiovisual post within the Bibliographic Standards Office, reflecting the library's increasing concern with nonbook matters.<sup>98</sup> The Library of Congress requested feedback on the usefulness to the library community of LC and Dewey classification numbers provided on LC cataloging records for audiovisual materials.<sup>99</sup> Weihs, Lewis, and Macdonald announced their intention to revise *Nonbook Materials* based on AACR 2.<sup>100</sup> Davinson called for annotation on catalog records for audiovisual materials, offering four criteria for a good annotation,<sup>101</sup> and was echoed by Markowitz.<sup>102</sup> Bibliographic control of film was discussed by Rains, who summarized the history and current status of the *Educational Film Locator* and related projects.<sup>103</sup> Hoffmann examined existing rules for choice of entry for sound recordings, pointing out difficulty with title

main entry for popular recordings.<sup>104</sup> A brief overview of the literature on classification and cataloging of slides, with a description of development of a system utilizing color xerography for this purpose, was presented by Clawson and Rankowski.<sup>105</sup> Lyon-Hartmann and Goldstein offered suggestions for the type of information that will be necessary for successful descriptive cataloging of computer-based instructional materials.<sup>106</sup>

The Conference on Cataloging and Information Services for Machine-Readable Data Files (MRDF) brought together fifty-five persons having an interest in establishment of a national program of cataloging and information services with the objectives of: (1) identifying key technical issues requiring resolution before implementation of a coordinated cataloging program; (2) defining the operational aspects of a centralized clearinghouse for MRDF cataloging; (3) identifying the procedural steps toward establishment of such a clearinghouse; (4) identifying and describing the potential information products and services and (5) establishing a limited secretariat for postconference coordination.<sup>107</sup> The conference recommended that LC develop a MARC format for MRDF. A two-phase program for other specific actions called first for a period of testing and evaluation by both the federal and private sectors of the AACR 2 rules for cataloging of MRDF, to be followed by other steps necessary for development of a national program including communication, definition of coverage, enforcement mechanisms, and resource requirements. Larsgaard's manual on map librarianship includes a section on cataloging maps,<sup>108</sup> and the Library of Congress announced that as of April 1 it would catalog all cartographic materials "by analogy with AACR revised chapter 6."<sup>109</sup>

Manley described the Bodleian classification of manuscripts, compared it with the practice of the British Museum, and suggested that the Bodleian scheme might be suitable for use by other libraries.<sup>110</sup> Cameron discussed bibliographic control of early books.<sup>111</sup>

A list of eleven discrete categories for classifying objects of human origin in museum collections was offered by Chenhall.<sup>112</sup> The system stresses classifying objects for their first intended use and is designed to allow additional terms to be added. Mayer urges caution in classification of paperbacks so that the economy of such purchases is not lost, and presents three simplified methods of classification; (1) the ABA classification of major subjects, which matches the *Pocketbooks in Print* system; (2) use of equivalency tables with Dewey Decimal to show hardcover and paperback locations for each subject; and (3) Dewey without decimals.<sup>113</sup>

Noting that ten scripts produce nearly all modern books, Wellisch rejects romanization and proposes establishment of a separate machine-readable data base for each script and production of the *National Union Catalog* (NUC) in corresponding separate registers.<sup>114</sup> In an extensive monograph, he explores the reasons for script conver-

sion and its effects, concluding with a "brief survey of possible alternative methods of bibliographic control for documents in dissimilar scripts, with special emphasis on the role of computers and other automated devices."<sup>115</sup>

The Library of Congress announced that it was considering complete romanization of its bibliographic records for all nonroman scripts except Chinese, Japanese, and Korean.<sup>116</sup> Economic stringency was given as the main reason; continuation of the use of vernacular scripts would cause many years' delay in the creation of machine-readable records for these items. It was noted that various user groups were finding romanized machine-readable records to be of great advantage; librarians from the American Association for the Advancement of Slavic Studies had endorsed romanization overwhelmingly.

Because of generally positive comments on its plan to issue romanized cataloging records for materials written in South Asian scripts, LC scheduled implementation of that project, pointing out that all romanized records would be available in machine-readable form and would not be issued also in the original script.<sup>117</sup>

Hebrew specialists opposed romanization of cataloging records in Hebrew because it involves adding vowels and indicating pronunciation of consonants and is therefore interpretive and corrective, inviting inconsistency.<sup>118</sup> It was also pointed out that this procedure would involve more cataloging time. A choice between two alternatives was offered: that of excluding Hebrew from the automated data base for the present, or that of using completely reversible, keypunch-compatible romanization in ANSI Z39.25-1975.

The American National Standards Institute (ANSI) published a standard for romanization of Yiddish, providing three systems,<sup>119</sup> and LC continued its series of romanization tables.<sup>120</sup>

The British Library is considering a change from its current practice on Cyrillic personal names entered under surname, which is to use the form most frequently found in English-language translations and reference sources, and has sought comments on preferences for current practice versus systematic romanization.<sup>121</sup>

The new Finnish cataloging code, *Suomalaiset luettelointisäännöt*, based on AACR, the cataloging codes of Denmark and Sweden, existing draft or published ISBDs, and early drafts of AACR 2, was published.<sup>122</sup> A new Austrian standard for the description of audiovisual materials based on ISBD(NBM) was slated for publication, while consideration was being given to three options for a cataloging code to be used in all Austrian libraries: *Regeln für die Alphabetische Katalogisierung* (RAK), AACR 2, or a totally new Austrian code.<sup>123</sup> A French handbook containing examples and guidance for all of the appropriate monographic cataloging standards issued by AFNOR (the French standards organization) was published in ring binder to permit amendments and additions.<sup>124</sup> ISBDs are used throughout, and

IFLA's *Names of Persons* serves as the basis for the chapters on names. Philosophy and specifics of the new German filing rules, considered as being an integral part of the cataloging code when RAK was developed, were set out by Kohl.<sup>125</sup> Filing also received attention in the International Standards Organization (ISO) with the establishment of a working group for the purpose of developing an international filing standard.<sup>126</sup> In the United States, the RTSD Filing Committee held an open hearing to present draft filing rules and to receive any comments.<sup>127</sup> Because a major objective of the new rules is ease of comprehension and application, they largely reflect the file-as-is principle. A revised edition of the Elrod programmed instruction guide was also published during the year.<sup>128</sup>

Thomas reviewed studies of cataloging rules taught in North American library schools over a twenty-year period and found that there was heavy emphasis on AACR and its forebears of 1908 and 1949.<sup>129</sup> AACR was strongly favored in teaching of both theory and practice of cataloging. In his study of subject indexing systems taught, Thomas found that Sears had a slight edge over LC in both theory and practice.<sup>130</sup> Concluding that instruction was concerned more with traditional subject heading lists than with modern developments, Thomas recommended that neglected ideas be given sufficient time in basic courses so as to allow students to compare and contrast them with more widely known principles and practices.

#### *Automation and Networks*

The Washington Library Network (WLN) began serving its first out-of-state participant, Alaska, via satellite communications,<sup>131</sup> while the Houston Public Library pioneered in the use of fiber optics for communication of bibliographic and ordering data.<sup>132</sup> The development status of bibliographic terminals in the United States was summarized by Michael Malinconico,<sup>133</sup> the recipient of the Esther J. Piercy Award "in recognition of his work as an advocate of the application of computer technology as a tool for facilitating the cataloging process, preserving cataloging principles, and enriching bibliographic access and control."<sup>134</sup>

Many events during the year underlined the statement by Haas that we are in the midst of a major effort to recast the bibliographic structure of the country.<sup>135</sup> A state-of-the-art report was presented by members of the Network Advisory Committee at the ALA Annual Conference,<sup>136</sup> and Martin discussed questions relating to the June 1977 report of the Network Advisory Group.<sup>137</sup>

The National Commission on Libraries and Information Science (NCLIS) awarded the Library of Congress partial funding for a project to develop the concepts and specifications for a data base configuration for a national library bibliographic network.<sup>138</sup> A Bibliographic Advisory Committee was appointed as an advisory group to review the work completed by consultants engaged to carry out parts of the de-

sign project and to assist in the development of national bibliographic policy.<sup>139</sup>

Three additional papers on network planning were issued by the Library of Congress: a glossary intended to assist communication by providing a standard vocabulary; a discussion of the fundamental premises behind a library catalog and authority file, with a framework for considering the participants and the resources in a nationwide network; and a presentation of the general technical requirements for a message delivery system.<sup>140</sup>

Schmierer's proposal for a "National Level Bibliographic Record—Books" was revised and distributed to the library community for comment by LC.<sup>141</sup> The document was concerned with the creation of cataloging records for current books by United States organizations and contains specifications for data elements necessary to be included in records acceptable for contribution to a national data base.

A recent survey of ARL libraries has found that 89 percent of the libraries are using automated cataloging systems and that two-thirds of the sixty-eight libraries with such systems are generally satisfied with their systems (fifty-three use OCLC, five use BALLOTS, and ten use other networks or local systems). Concern was expressed for the quality of OCLC's contributed records and for improved subject access to the various data bases.<sup>142</sup>

Tedd's general introduction to computer-based library systems covers computer hardware, operating systems, programming languages, telecommunications, and information retrieval.<sup>143</sup> Martin's overview of on-line bibliographic networking reviews recent activities in North America, including in some instances networking plans for 1979 and subsequent years.<sup>144</sup> Bourg, Lacy, Llinas, and O'Neill described a systematic approach to the design of search keys for corporate author records in an automated data base.<sup>145</sup> Martin posits that present-day planning is based on assumptions that are no longer valid; societal, economic, and technological changes have occurred more rapidly than our slow-moving organizational machinery can accommodate.<sup>146</sup> It is suggested that national and local plans of the future should have explicit flexibility to accommodate appropriate changes as they occur.

Pierce and Taylor propose a model to calculate the costs of automated cataloging systems, based upon the use of the cataloging copy found in a given system's data base.<sup>147</sup> Results of use of the model to compare two systems, OCLC and BALLOTS, with a manual system are presented.

Gorman asserts that the main driving force toward change in bibliographic systems today is economic and suggests that transfer, or replication, of automated systems from one library to another is an appropriate method of cutting development costs and enhancing possibilities for future cooperation in response to this economic need.<sup>148</sup>

Proceedings of two Clinics on Library Applications of Data Processing—on the economics of library automation and negotiating

for computer services—were published.<sup>149</sup> The 1978 clinic centered on problems and failures in library automation.<sup>150</sup> Poor staff attitude and preparation, unrealistic expectations, and inadequate planning and cost estimating were cited repeatedly as causative factors in unsuccessful efforts.

Axford laments the utilization of OCLC as a means of sustaining precomputer card files and suggests that full use of available technology in library technical services will be a contributing factor in the survival of small liberal arts colleges.<sup>151</sup> West, Quiros, and Glushenok present the fifth of a series of bibliographies on library automation, noting that their 1973–77 compilation shows a shift from individual library applications to networking.<sup>152</sup> An ALA preconference institute revealed the same trend toward networking.<sup>153</sup> Information retrieval, micrographics, and the impact of automation on management, patrons, and librarians were other areas focused on by the eight speakers.

Ready and Drynan present a survey of library automation affecting Canadian libraries, and Beckman provides a summary of the Canadian situation in automated cataloging systems and networks.<sup>154</sup>

Informatics, Inc., introduced MINIMARC, a new information processing system for libraries that eliminates data conversion tasks and simplifies data update and data retrieval tasks.<sup>155</sup> A new company, Super Key, was formed for the exclusive purpose of providing conversions of libraries' bibliographic files from hard copy or microfilm to machine-readable formats.<sup>156</sup>

#### *National Data Bases*

The Melvil Dewey Award, given for creative professional achievement of high order, particularly in Dewey's fields of interest, was bestowed in 1978 on Frederick G. Kilgour, director of OCLC.<sup>157</sup>

Several changes in OCLC's pricing structure were made during the year. On the basis of legal advice and recent rulings by the Internal Revenue Service, the 20 percent surcharge on for-profit users' fees was abolished.<sup>158</sup> A charge was established for an update transaction that first adds an institution's symbol to an existing bibliographic record; the charge was designed to prevent misuse of the update function.<sup>159</sup> The price of catalog cards was reduced from 3.9 cents to 3.6 cents, and a 6 percent discount, first available in 1978/79, on payments for catalog cards made annually in advance will allow a net charge of 3.4 cents.<sup>160</sup> The Southeastern Library Network (SOLINET) announced reductions in OCLC user fees for its members,<sup>161</sup> and Cornell University reported the results of a two-month study to determine the costs of upgrading the quality of OCLC cataloging records.<sup>162</sup>

Use of OCLC for serials operations at three libraries was described: Central Michigan University by Buckeye, Kent State University Libraries by Kamens, and the University of Illinois by Corey.<sup>163</sup> A study of

errors found in OCLC member-input cataloging was reported by Ryans.<sup>164</sup> Using AACR, ISBD(M), and OCLC's "Standards for Input Cataloging" as criteria for correctness, she found that 60 percent of the records could be accepted with no changes. The two fields generating the most errors were subject headings (31 percent) and collocation (39 percent).

Hewitt provides a survey of the use of OCLC by the forty-seven charter members of OCLC and Gopen and Morita examine the effects of OCLC adoption upon technical services management at Ohio State University.<sup>165</sup> Claremont Colleges Library reported elimination of a 30,000-item backlog and a drop of 29 percent in cost-per-book added during a four-year period using OCLC.<sup>166</sup>

A useful manual on OCLC cataloging was compiled by Cope.<sup>167</sup>

OCLC began 1978 under a new governance structure that expanded the Board of Trustees to include representation from participating libraries throughout the country and provides for a Users' Council comprised of individuals elected from the membership, representing contractors of OCLC services.<sup>168</sup> The Arthur D. Little study recommending the change includes observations and concerns that are pertinent to library systems in general.<sup>169</sup>

AMIGOS governance underwent discussion and examination by membership concerned with issues similar to those involved in the OCLC reorganization.<sup>170</sup> Similarities were noted between AMIGOS and SOLINET and developments at the New England Library Information Network (NELINET). Denver's Bibliographic Center for Research (BCR) announced plans to expand its Advisory Council to provide adequate representation for its growing membership as required by its bylaws.<sup>171</sup> The Midwest Region Library Network (MIDLNET) set new requirements for membership and board participation and reaffirmed its objectives.<sup>172</sup>

The new OCLC Users' Council lists as its top priorities: (1) communications between OCLC operational and management personnel and the individual OCLC users; (2) implementation of AACR 2; (3) development of subsystems; (4) quality control within the system; and (5) network growth and terminal allocation.<sup>173</sup>

The new Internetwork Quality Control Council (IQCC) has concerned itself primarily with education as a quality control mechanism.<sup>174</sup> Chairman Nichol reported that IQCC held five meetings during 1978 and made ten recommendations to OCLC.

OCLC's on-line system marked its seventh anniversary in August with more than 1,400 libraries in forty-eight states.<sup>175</sup> The 1977/78 annual report showed 10.6 million books cataloged, for which OCLC printed 82.4 million cards.<sup>176</sup> The percentage of cataloging using records already in the data base rose to 93.8 percent, from 92.4 percent in 1976/77. The Bibliographic Records Management Section corrected 49,877 errors during the last fiscal year and estimated approximately half of the errors to be typographical.<sup>177</sup> Top priorities for correction

were: (1) changing incorrect codes; (2) filling in frequency on serials records; and (3) deleting duplicates. The Users Services Division reported that 86.8 percent of printer use in conjunction with OCLC terminals was to aid in cataloging.<sup>178</sup> Only one library reported use of a printer with a public service terminal.

Use of OCLC archival tapes for production of a new accessions list and a KWOC index to all newly cataloged titles at Caltech was reported by Roth.<sup>179</sup> OCLC outlined its first international agreement, to provide libraries in the Netherlands with bibliographic information from its on-line union catalog.<sup>180</sup> A guide for cataloging serials with the OCLC format, designed for use at the terminal, was prepared by Redfield and endorsed by OCLC.<sup>181</sup> OCLC decided to maintain curbs on the use of its new Serials Control Subsystem until improvements were made to the automatic check-in component and a claims component was added.<sup>182</sup>

Levine and Logan present a comparison of OCLC and BALLOTS, providing, in parallel texts, basic descriptive data about a wide range of aspects of the two systems.<sup>183</sup>

BALLOTS revised its pricing structure, decreasing shared cataloging rates, offering special rebates for original cataloging, and increasing charges for searching without cataloging.<sup>184</sup> A California State Library cost/benefit study showed BALLOTS to be no more expensive than previously used systems and to be more effective in several aspects of service.<sup>185</sup> Other developments at BALLOTS included: (1) changes in its service hours to accommodate East Coast users; (2) a new tape service, the Catalog Data File Tape, which reflects for a shared-cataloging library all of its cataloging records as they exist in the BALLOTS data base; (3) a new terminal, the ZMS-90; (4) Network File Design, a new project to restructure the data base to support all MARC records distributed by the Library of Congress, including authorities, serials, films, etc.; and (5) the second videotape in the BALLOTS series, "A Librarian's View of BALLOTS."<sup>186</sup>

Stanford associate provost Edward E. Shaw was appointed interim director of BALLOTS, reflecting the "importance BALLOTS has to the University, and the University's commitment to guide the BALLOTS Center to independent nonprofit status."<sup>187</sup>

BALLOTS and the BCR entered into a contract for BALLOTS to serve more than twenty-five clients of BCR, with four using BALLOTS as their primary system.<sup>188</sup> The University of California chose OCLC to supply technical processing services for the libraries in its nine-campus system,<sup>189</sup> while the eastern Research Libraries Group (RLG) chose BALLOTS.<sup>190</sup>

Following the three-to-one vote for BALLOTS, Harvard withdrew from RLG, noting that its continued participation was not the most effective course for Harvard or RLG. Harvard library director Bryant explained that the "idiosyncratic nature of Harvard" was responsible for the difficulties experienced by that institution as it attempted to

participate in RLG. Skipper expressed regret at Harvard's withdrawal but asserted that the incident did not "imply that complex research libraries can't cooperate." There was speculation on the effect that the BALLOTS choice would have upon the highly developed automation efforts of another RLG member, New York Public Library.<sup>191</sup>

Later in the year, the restructured RLG announced plans for the Research Libraries Information Network (RLIN) and elected BALLOTS acting head Shaw the president and director of RLG.<sup>192</sup>

Other cooperative ventures during the year included the project of LC and Northwestern University to build and maintain cataloging data and location records for Africana in Northwestern and other libraries.<sup>193</sup> LC began compilation of a Near East union list and Harvard University Library received a grant to add Middle Eastern serial records to the CONSER data base.<sup>194</sup> The COMARC project, devised to broaden LC's MARC coverage of books and to test whether a national bibliographic data base could be built with decentralized input, maintaining data consistency, was scheduled to end on May 30, 1978.<sup>195</sup> A final report from LC was anticipated.

Continuation of the CONSER project was announced by LC, CLR, NLC, and OCLC.<sup>196</sup> Originally planned and implemented as a two-year program, CONSER was to have been supported by LC at the end of the two years. However, fiscal and resource constraints prevented LC from sufficiently expanding its automation activities, and so CONSER will remain at OCLC, which will assume the managerial role, while LC and NLC continue responsibility for the bibliographic quality of the data base.

Other CONSER developments include the production of a microfiche CONSER/KWOC index, jointly produced by OCLC and CLR, and an agreement by participants to use successive entry cataloging for title changes back to 1967, when adoption of AACR took effect.<sup>197</sup>

Carter described the on-line union list file currently being developed by the University of Pittsburgh and other libraries of the Pittsburgh Regional Library Center.<sup>198</sup> Indiana University received an Office of Education grant to develop an automated bibliographic data file listing its periodical holdings, including 70,000 journals, pamphlets, and newspapers.<sup>199</sup>

Groot discusses ISSN and CODEN from the user's viewpoint.<sup>200</sup> The ANSI standard, *International Standard Serial Numbering* (Z39.9-1971), has been completely rewritten and submitted for review.<sup>201</sup> This revision brought the American standard into conformity with the pattern established for the international system by ISO in 1974. The United States Postal Service proposed display of a number assigned by the service on each second-class controlled publication, but, after hearing persuasive arguments from many segments of the library and information community, settled on the ISSN for this purpose.<sup>202</sup> Neubauer, in discussing the present status and future expectations of the program for the assignment of the International Standard Book

Number, suggested that its original design as a number for the physical item rather than the bibliographic item was a drawback and proposed the adoption of a bibliographic ISBN (BISBN).<sup>203</sup>

A new directory, *Sources of Serials*, provides access to 90,000 current serials by the names of 63,000 publishers, with a standard name listing for the current names of serial publishers and with 4,000 cross-references.<sup>204</sup>

Perego discusses serials cataloging under AACR 2, summarizing the history and development of the code to show how long questions concerning serials standardization and cataloging have been under consideration and to point up the various directions potential answers and solutions have taken.<sup>205</sup> Specific areas of ISBD(G) are examined for serials cataloging impact. A practical approach to serials cataloging was presented by Smith in a new manual based on AACR 1.<sup>206</sup> With the publication of AACR 2, the RTSD Serials Section's ad hoc AACR Revision Study Committee was dissolved, and a new committee established: the Committee to Study Serials Cataloging.<sup>207</sup> Among discussion items at its first meetings were processing of serials at LC and LC's relationship to the CONSER project.<sup>208</sup>

#### *International Activities*

The structure and philosophy of library service in Czechoslovakia, with a summary of the state of the art of cataloging, classification, subject lists, and machine systems, were set out by Risko.<sup>209</sup> During the Forty-fourth Council Meeting of IFLA, the Directors of National Libraries approved a statement that the International MARC Network Library Committee Program for 1978-79 should receive and disseminate an expected report on the supply and use of MARC records, prepare a future program for MARC Network Development, and make proposals for establishing an appropriate MARC Network Coordinating Body.<sup>210</sup>

The IFLA Section on Cataloguing agreed upon revised terms of reference for the section,<sup>211</sup> and the Standing Committee on Cataloguing discussed new procedures for establishment of working groups.<sup>212</sup> The nineteenth edition of the *Dewey Decimal Classification* was the subject of Humphry's presentation to the new IFLA Roundtable on Classification, while Mills' paper dealt with the new Bliss Classification.<sup>213</sup>

New statutes for the UBC (Universal Bibliographic Control) Steering Committee were approved; the Steering Committee was enlarged to include representatives from the five IFLA divisions most closely concerned with the work of the UBC Office.<sup>214</sup> Clarke defined the relationship between two major IFLA projects: UBC and UAP (Universal Availability of Publications).<sup>215</sup>

The Plenary Meeting of ISO/TC 46 saw a number of changes in the structure of the group's work; a new subcommittee, SC6, overtook responsibility for standardization of bibliographic elements required for bibliographic references and descriptions, including definitions and

the corresponding tags, and the content and the sequence of elements for manual and machine systems.<sup>216</sup>

The national libraries of the Anglo-American countries met in March to discuss cooperation in cataloging matters.<sup>217</sup> Among topics discussed were filing, the composition and responsibilities of international groups that consider content designators and exchange formats, ISDS and duplication of serials cataloging efforts, CIP, national plans for UNIMARC conversion and other MARC format matters, use of DDC, AACR 2 options, interpretation, and implementation, key-title, nonbook materials, authority files, romanization, and communications among national bibliographic agencies. The group also adopted a name—ABACUS: Association of Bibliographic Agencies of Britain, Australia, Canada, and the United States.

The RTSD International Cataloging Consultation Committee contributed recommendations to the International Relations Committee of ALA as input for an ALA policy statement on international activities and recommended to the RTSD board two alternatives for the future organizational structure of code revision and maintenance within RTSD.<sup>218</sup> It also considered matters related to particular conditions and procedures within ALA and RTSD concerning participation in international activities.<sup>219</sup> The committee's final report was scheduled for June 1979.

Developments related to ISBD included (1) publication of an annotated bibliography of the ISBD;<sup>220</sup> (2) Anderson's outline of the history of the ISBDs and the relationship of IFLA's standardizing work with that of ISO/TC46;<sup>221</sup> (3) a discussion of the present state of the program;<sup>222</sup> (4) Gorman's commentary on the ISBD(S) and ISBD(NBM), with suggestions for improvement of the ISBD program;<sup>223</sup> (5) production of a manual giving guidance on the application of ISBDs to bibliographic records in nonroman scripts;<sup>224</sup> (6) formation of two working groups, one on an International Authority Control and the other on an ISBD(AN)(Analytics);<sup>225</sup> (7) circulation of the final draft of ISBD(A)(Old and Rare Books) following a meeting of the ISBD(A) working group in April;<sup>226</sup> (8) continued discussion on the use of Area 3 in ISBD(Music) for statements of musical presentation;<sup>227</sup> (9) discussion of ISBD(NBM) at a meeting of the IFLA Standing Committee on Cataloguing at which the International Association of Music Libraries (IAML) and the International Association of Sound Archives (IASA) requested either a separate ISBD for sound recordings or a revision of the ISBD(NBM) to accommodate unique characteristics of sound recordings.<sup>228</sup> The committee made plans to review and discuss specific IAML/IASA suggestions with the hope that a "provisional supplement" or "manual of instruction" for application of ISBD(NBM) to sound recordings could be issued.

The following ISBD descriptions were published: Cartographic materials,<sup>229</sup> General (annotated text),<sup>230</sup> Monographic materials (first standard edition),<sup>231</sup> and Serials (first standard edition<sup>232</sup> and a

French translation, undertaken by the Bibliothèque Nationale du Québec and published by the Bibliothèque Nationale).<sup>233</sup>

The IFLA Working Group on Corporate Headings submitted its final recommendations on form and structure of corporate headings to the library community for comment.<sup>234</sup> The Working Group, drawn from various types of libraries, with emphasis on organizations concerned with drafting of cataloging codes, was guided in its work by Verona's *Corporate Headings* and by the Paris Statement of Principles of 1961. Dahlström commented on the first recommendations of the Working Group with particular attention to headings for international conference proceedings in an attempt to determine possible general patterns in their naming and presentation.<sup>235</sup>

A second edition of the *List of Uniform Headings for Higher Legislative Bodies in European Countries* is planned, to include only revision of the countries already included; because of the tight preparation schedule, new countries are not to be added.<sup>236</sup> A list of uniform headings for anonymous classics in most European literatures was expected before the end of the year.<sup>237</sup>

"What's in a Name?"—an institute on authority files—was held in Vancouver and Ottawa and included participation by such institutions as NLC and LC.<sup>238</sup>

#### *National Cataloging Agencies*

On April 1 LC began to create in machine-readable form authority records for new name headings.<sup>239</sup> The preparation for conversion to machine-readable form of existing name authority records began on October 10.<sup>240</sup> The LC/GPO cooperative project for the development of name authorities moved into the operating phase.<sup>241</sup> It is expected that the headings created in the project, so far limited to corporate names, will become available to the library community through the LC automated name authority distribution.

The IFLA UBC Office reported preliminary results of a survey of national libraries, which showed that "the bulk of authority files are maintained manually on cards and of these a number are integral with the official catalogue of a collection."<sup>242</sup> The survey is viewed as a preliminary step toward future IFLA work on the exchange of authority files. The Teheran Book Processing Center (TEBROC) published an authority list for names appearing in TEBROC cataloging from 1969 to 1976.<sup>243</sup> Baecker and Senghas prepared a manual for establishment and maintenance of a name authority file, based on AACR and LC headings.<sup>244</sup>

As a result of the International Congress on National Bibliographies, Paris, 1977, Jean Lunn presented a model for legal deposit designed to serve as a basis for countries to use in attaining national bibliographic control; the study was determined by the IFLA Section on National Libraries to be a useful contribution to the field.<sup>245</sup> Mayo-Znak's study on correlation of the functions of catalog card

production and maintenance of a national bibliography was received by the IFLA General Council, to be taken into account in compilation of drafts of related documents such as "General Demands Made of the Catalogue Card."<sup>246</sup> Elrod discussed the availability and distribution of bibliographic records, suggesting microform distribution of national bibliographies as a means of increasing the accessibility of bibliographic records.<sup>247</sup> A report on the International Congress on National Bibliographies held in Paris in 1977 includes a list of the preparatory documents, reports of the meetings, and the final recommendations.<sup>248</sup> The Unesco Regional Seminar on Bibliographic Control in Africa, the first seminar on bibliographic control to owe its convening to the Paris conference, was held in Lagos in early 1978 and concentrated on description and demonstration of two particular aspects of bibliographic control: ISDS and ISBD.<sup>249</sup> It was resolved there that all participants agreed to apply both standards in production of their national bibliographies and control of serials immediately.

The National Diet Library (NDL) has automated its processing system for printed card orders and is producing by computerized methods the Japanese national bibliography.<sup>250</sup> The new *Nippon Cataloguing Rules* were adopted in January. At a CARICOM (Caribbean Community) regional bibliography meeting it was decided to expand coverage of the *CARICOM Bibliography* to nonbook materials, using ISBD(NBM) for the description, and to compile a consolidated authority file for subject headings and corporate names.<sup>251</sup> For the first time in Latin America a centralized cataloging service was initiated at the University of Costa Rica to provide cataloging data for university libraries in Central America.<sup>252</sup> The *Singapore National Bibliography* began contacting likely sources in preparation for a retrospective national bibliography; a similar project is planned for Malaysia.<sup>253</sup> The National Library of Malaysia compiled rules for Iban and Malay names and revised a list of Malay titles, compound names, and variant spellings. The changes in daily work resulting from the implementation of electronic data processing at Denmark's Bibliotekscentralen were described by Christensen.<sup>254</sup> The FAUST project, a cooperative, automated acquisitions, cataloging, and circulation system of three Danish library organizations, was discussed by Balling.<sup>255</sup>

Publication of the *National Union Catalog of Pre-1956 Imprints* continued on schedule, and a pilot study was begun to determine costs, schedule, and format for a supplement.<sup>256</sup> At a program entitled "New Directions for the *National Union Catalog*" presented at the ALA Annual Conference, Holmes discussed economic forces, the needs of NUC users, and networking as elements influencing future directions, Hsia spoke on the LC book catalogs today, Bernard covered the planning of register-based book catalogs, and Remington described procedures for distribution of book catalogs.<sup>257</sup> A report prepared by Payne discussed the reliability of non-LC cataloging records in NUC and recommended solutions to the problems identified.<sup>258</sup>

LC explained that the absence of price information in cataloging records was due to the absence of this information in the book, and indicated that LC would continue to add the price to the record when available.<sup>259</sup> A description of the old-style LC card numbers was provided, including information about MARC record equivalencies.<sup>260</sup> A new electronic card printing system, CARDS, was installed at LC, allowing on-demand production of cards from MARC records, which are then automatically arranged and labeled by the customer, eliminating the need for maintaining a large card inventory.<sup>261</sup> The British National Bibliography (BNB) announced that its card service would be contracted to the Birmingham Libraries Cooperative Mechanization Project (BLCMP).<sup>262</sup> A steady decline in the use of the BNB card service over several years has been noted as libraries transferred to COM catalogs. A cumulated edition of *Books in English* on ultrafiche covering 1968–77, with a single author/title sequence, will be prepared as a result of expressed demand.<sup>263</sup> The needs of academic libraries in Britain for retrospective bibliography were discussed by Jolliffe, focusing on four desiderata: (1) “a catalogue or bibliography of all printed books and pamphlets in the various languages of Europe, from Gutenberg to the present day”; (2) “a union catalogue of all books to be found in the libraries of the British Isles”; (3) “a British bibliography, covering all works published or printed in the British Isles, from Caxton to the present day”; and (4) “a subject catalogue corresponding in scope to any of these three—though the larger in scope the better.”<sup>264</sup>

The Australian Government Publishing Service agreed to provide cataloging prior to publication for its output.<sup>265</sup> The data will form the basis for entry in the *Australian National Bibliography* and will be included in the Australian MARC Record Service. LC listed the more than 1,600 publishers currently participating in its CIP program and asked for feedback from librarians on the effectiveness of the program.<sup>266</sup>

The National Program for Acquisitions and Cataloging (NPAC) announced discontinuance of coverage of titles in clinical medicine because of increased availability of cataloging data from other sources.<sup>267</sup> The usefulness of the national bibliography number in the LC cataloging record for items received from foreign sources was questioned.<sup>268</sup> Alternatives suggested were dropping the abbreviation indicating the source and the number, or dropping only the number.

#### *MARC Activities*

The LC MARC data base reached the million mark on May 31, nine years after establishment of the MARC editorial office.<sup>269</sup>

Characteristics of two library catalog systems derived from the British MARC data base were described at the second Conference on Practical MARC Cataloguing.<sup>270</sup> One system was for a single library, and the other for a large cooperative system.

Two cumulative indexes to the LC MARC data base have been prepared by Carrollton Press.<sup>271</sup> The *Cumulative Subject Index to the MARC Data Base, 1968-1978* (in eighteen volumes) is "the only single-alphabet cumulation of all the subject headings assigned by LC during the first decade of MARC input." The *Library of Congress Classification Number Index to the MARC Data Base, 1968-1978* (in eight volumes) is a "cumulative listing of all the LC Class Numbers assigned."

In an effort to encourage uniform usage of MARC tags in the various bibliographic formats, LC and BALLOTS began jointly to build an on-line data base describing the U.S. MARC data elements used in LC MARC records.<sup>272</sup> The data base represents an expansion of the *BALLOTS Data Elements Dictionary* maintained by BALLOTS in machine-readable, text-editing form.

UNIMARC, the universal MARC format developed to facilitate the international exchange of bibliographic data in machine-readable form, was published, with notes on the scope of the format and the international standards on which it is based, definitions, principles used in design, and guidelines for use.<sup>273</sup> The British Library plans to implement UNIMARC in 1980, as does the State Library of South Africa, while NLC and the National Diet Library are working toward implementation but have set no date.<sup>274</sup> LC has announced adoption of UNIMARC for its future international exchange of machine-readable data, but implementation will be dependent upon completion of other automation projects with higher priority.<sup>275</sup> Until then, its exchange programs with Canada, Britain, France, and Australia will continue.

The International Symposium on Bibliographic Exchange Formats, held in Sicily in April, recommended that development of a common format be treated as a high priority by bodies such as IFLA and ISO and suggested elements to be included in comprising the format.<sup>276</sup> A follow-up meeting of the Ad Hoc Group on the Establishment of a Common Communications Format, held in Paris in October, specified a plan of work and a schedule of implementation.<sup>277</sup> The formats under consideration included UNIMARC and the various ISBDs.

A number of reports commissioned by the MARC International Network Steering Committee were completed or in progress. The first, by Wells, includes recommendations concerning bibliographic record exchange policy and the organizational, financial, and operational requirements appropriate to development of the network.<sup>278</sup> The second, prepared by the IFLA UBC Office, following investigation of incompatibilities in the bibliographic records produced by the national bibliographic agencies in the MARC network, presents proposals concerning name headings, authority files, bibliographic descriptions, subject approaches, and romanization.<sup>279</sup> Preliminary results of the third, on copyright and bibliographic records, were presented by Rosenthal.<sup>280</sup> He identified as major problems lack of clear definitions of (1) a modification to a machine-readable record and (2) what institutions

are included under the term "cultural and educational." His final report will describe the copyright situation as it affects the producers of MARC records, outline existing policies regarding the supply and use of bibliographic records adopted by the major national agencies in the MARC network, consider the particular copyright problems arising out of the practice of modifying records to conform to national or local standards, and advise on the feasibility of a general set of rules or guidelines to provide an overall framework for bilateral agreements between national agencies covering the supply and utilization of records.

The LC MARC formats for books and serials were translated into Spanish, and the National Library of Australia began work on Australian MARC (AUSMARC) formats for serials and nonbook materials as well as a revision of the existing AUSMARC monographs format.<sup>281</sup>

*Maps: A MARC Format* appeared, with guidelines for implementation of the provisions of ISBD for cartographic materials.<sup>282</sup> An overview of the historical development and current status of MARC cataloging for maps was provided by Stibbe.<sup>283</sup>

*The MARC Serials Editing Guide*, second CONSER edition, provides instructions for data preparation of serials catalog records for on-line input into OCLC.<sup>284</sup>

MARBI adopted fifteen proposals for MARC format changes, including addition of a variable field in the books format for the projected publication date for CIP titles, and a new subfield in the serials format for differentiation among various categories of ISSN.<sup>285</sup> The LITA MARC Users Discussion Group focused on two topics during the year: "MARC in a time of change" and "Authority information in a network environment."<sup>286</sup>

#### *Subject Analysis*

The Margaret Mann Citation for 1978 was awarded to Derek Austin "in recognition of his significant contribution to the establishment of a new direction in subject analysis through the development of the PREserved Context Index System (PRECIS)."<sup>287</sup>

The Society of Indexers celebrated its twenty-first birthday with an assessment of achievement of its objectives.<sup>288</sup> The journal *International Classification* began to appear more frequently during 1978 with a new subtitle: "A Journal Devoted to Concept Theory, Organization of Knowledge and Data, and to Systematic Terminology."<sup>289</sup> The purpose of the new subtitle was to clarify the "connections existing between classification and philosophy . . . on the one hand, and between classification and the theory and practice of terminology and definition on the other hand."

The Faculty of Library Science Library, University of Toronto, accepted transfer of the Bibliographic Systems Center collection from Case Western Reserve University.<sup>290</sup> The collection consists of more than 1,800 titles, including classification schemes, thesauri, and subject heading lists.

The third edition of Foskett's *Subject Approach to Information* was published, including updated material on subjects such as PRECIS.<sup>291</sup> Bakewell examined in some detail the use of particular classification and/or indexing schemes in a number of libraries.<sup>292</sup> A proposal containing rules for the formation of citation codes in classification and terminology was put forth by Dahlberg, in anticipation of use for an authority file.<sup>293</sup>

PRECIS received much attention during the year. The LC decision not to adopt PRECIS, announced at the January hearing on closing LC's catalogs, caused disappointment in some quarters. RTSD CCS Subject Analysis Committee members expressed enthusiasm for PRECIS but felt that LC's rejection of PRECIS as an alternative system left little hope for its widespread use in the United States in the near future.<sup>294</sup> Dykstra reviewed the LC report on PRECIS, point by point, presenting a case for reconsideration by the Library of Congress.<sup>295</sup> In the autumn of 1977 the British Library began making copies of its PRECIS indexing authority files regularly available on microfiche.<sup>296</sup> Bakewell studied indexers' reactions to PRECIS and Robinson reported on an experiment in teaching PRECIS as a twelve-week continuing education course.<sup>297</sup> Verdier delineated the current status of the PRECIS Translingual Project and its use of a "pivot file," or switching language consisting only of language-independent addresses but no indexing terms.<sup>298</sup> The syntactical differences between PRECIS and POPSI were set out by Mahapatra.<sup>299</sup>

The Library of Congress affirmed that, although changes in its subject headings were planned to replace obsolete terminology, modernize spellings, eliminate antiquated patterns, broaden or alter standard subdivision, and accommodate AACR 2, publication of *Library of Congress Subject Headings* (LCSH) would continue.<sup>300</sup> Steinweg found a diversity of punctuation patterns in LCSH, resulting in filing problems and probable information retrieval problems, and presented several suggestions for improvement.<sup>301</sup> Wellisch examined LC's new instructions on indirect subdivision of topical headings, considering cost-effectiveness and usefulness for users interested in historical and/or geographical aspects of a topic.<sup>302</sup> He asserted that incongruous and unpredictable headings would result and proposed instead direct subdivision of topical headings for all countries or regions in keeping with previous LC practice for cities, countries, and regions in the United States. Svenonius discusses Kaiser's indexing method, which distinguished items by the categories of "concrete," "process," and "country."<sup>303</sup> Chan identified LC's recent use of split subject files as representing a departure from the long-standing LCSH principle of uniform heading.<sup>304</sup> She also prepared a more general work, the first in almost thirty years, outlining the history, structure, and practical application of LCSH.<sup>305</sup> Gilbert described current practices of the British Library in application of LCSH and LC classification numbers.<sup>306</sup>

The eleventh edition of *Sears List of Subject Headings* appeared, in Volume 23, Number 3, Summer 1979

cluding considerable updating of terminology and the addition of new headings.<sup>307</sup> The final report of the Subject Access Project was published, relating the experiences of the project with the BOOKS data base, using subject descriptions developed from contents pages or indexes of books.<sup>308</sup> Schuck and Hoffman reported on the Seventh International Conference on Computational Linguistics, positing that in the future the need for high-quality translations will continue to rise and that computer-aided translation offers the best chances of successful and effective utilization of existing capabilities.<sup>309</sup> The work of ISO/TC 37 Working Group 3, on layout of vocabularies, was summarized.<sup>310</sup>

The RTSD CCS Subject Analysis Committee's Subcommittee on Racism and Sexism in Subject Analysis reviewed four of its projects: (1) evaluation of subject headings and class numbers applied to materials dealing with groups generally of concern to the Equal Employment Opportunity Commission; (2) development of subject headings for native American groups based on authenticity claimed by the groups themselves; (3) compilation of a bibliography on black subject headings and class numbers; and (4) compilation of a bibliography of Materials on Terminology as It Relates to Women.<sup>311</sup> Marshall presented a thesaurus of terms intended to be suitable for indexing materials of concern to women and other classes of people inadequately covered by LCSH.<sup>312</sup>

Rodriguez examined bibliographical problems caused by geographic names in subject cataloging, with a view toward determining procedures for establishing correct headings when changes of name occur and deciding on necessary catalog maintenance provisions.<sup>313</sup> Walker provided a rationale for split files for subject headings based on the assertion that the point of view of subject headings should be descriptive rather than prescriptive.<sup>314</sup>

Capewell described a computer-produced subject index begun in 1973 at Manchester Polytechnic Library.<sup>315</sup> Constructed on chain indexing principles, it is an in-house system in batch mode that uses a small amount of time but an increasing amount of space on the institution's computer. Raghavan and Iyer present an examination of a detailed survey on "facet-analyzed subject strings" in the field of social sciences in which "subject strings of four types were administered as a stratified sample of responses to identify the gaps in semantic connotation of terms."<sup>316</sup> Henzler's quantitative comparison of free text and controlled vocabulary in indexing and retrieval based on CANCERNET reveals the necessity of both "in an optimum combination."<sup>317</sup> Zingel described the international cooperative documentation system called TITUS (Textile Information Treatment Users' Service), which uses a special linguistic method of automatic translation of abstract and index terms, with controlled vocabulary and controlled syntax, to supply abstracts of English, French, German, or Spanish from inputs in one of the other languages.<sup>318</sup> The Component Word Index sys-

tem, a new search system for MARC records that can search for words in titles, descriptors, and corporate entries, is now undergoing testing.<sup>319</sup>

LC published a second, cumulative edition of the Class P tables covering subclasses PN, PR, PS, and PZ and announced that because of budgetary constraints it would no longer be able to assign alternate class numbers to fiction in English classed in PZ.<sup>320</sup> Preferences were asked on the alternatives of (1) using PR and PS, dropping PZ, or (2) using PZ and dropping the others. Announcement of the forthcoming publication of the LC shelflist in microfilm, microfiche, and in hard copy was welcomed by both teachers of classification and practicing classifiers.<sup>321</sup>

In spite of the delays in catalog closing and adoption of AACR 2, LC planned to go ahead with adoption of DDC 19 on January 2, 1980, while the British Library postponed adoption to coincide with AACR 2 and allow the computerized production formats for both new standards to be prepared in one and the same operation.<sup>322</sup> Custer gave an overview of the characteristics of DDC 19, and Comaromi encouraged adoption of the new edition *in toto*, suggesting a plan for reclassification.<sup>323</sup> Comaromi also summarized a survey of the use of the DDC in the U.S. and Canada.<sup>324</sup> Eighty-five percent of all libraries use DDC; of these, 75 percent use the most recent edition. Stevenson found a number of the structural and notational features of DDC and LCC in the German 1847 Bibliographic Classification Scheme of Andreas Schleiermacher, asserting that this points to much more interaction between classification in the United States and classification in Europe than has been heretofore suggested in Anglo-American library literature.<sup>325</sup>

The *Bliss Bibliographic Classification Bulletin* reverted to its original purpose—to provide a maintenance service for the scheme.<sup>326</sup> A preliminary *BSO—Broad System of Ordering*, a classification of the whole field of knowledge limited to about 4,000 terms in English, was published.<sup>327</sup> The classification is intended as a switching mechanism to link different classifications and thesauri. Discussions of the Universal Decimal Classification (UDC) in an automated environment were provided by Lloyd, Rigby, and Sydler, while the 1883 Bodleian book classification scheme was analyzed by Heaney, who predicted that its age and inconsistencies would result in its discontinuance in the near future.<sup>328</sup>

Smith advocates full classification of serials for the purpose of keeping subject materials together, enhancing the use of serials and their availability for reference work and shelving title changes together.<sup>329</sup> Osborn offered a new edition of Herdman's introductory manual on classification.<sup>330</sup> The proceedings of the FID Symposium on General Classification Schemes in a Changing World appeared.<sup>331</sup> Policies and practice of revision adopted for LCC, DDC, and UDC are reviewed by Curwen, who concludes with a consideration of the revision of

Bliss.<sup>332</sup> The practical problems of reclassification are addressed by Bartlett, reporting on such a project at the Kingston Polytechnic Library.<sup>333</sup>

Activities of the Classification Research Group (CRG) for 1973-77 were summarized and the first meeting of the Canadian CRG reported, including summaries of papers by Watters and Shepherd, Nitecki, Alley, and Harris.<sup>334</sup> Meetings of the Gesellschaft für Klassifikation, devoted to cooperation in classification, were reported by Wolfgang Dahlberg, while Ingetraut Dahlberg called for a national classification society in each country to consider all areas of application of classification and to invite philosophers and terminologists "to avert the danger of acquiring a one-track mind."<sup>335</sup>

### *Miscellany*

Akers' *Simple Library Cataloging* appeared in its sixth edition, completely revised and rewritten by Curley and Varlejs, including new information on areas such as cataloging of audiovisual materials.<sup>336</sup> Elrod's *Modern Library Practice Series*, second edition, includes volumes on the unit card, filing, classification, choice of entries, and choice of subject headings.<sup>337</sup> Hoffman presented an introduction to cataloging for the small library, aimed at those who have had no formal instruction in cataloging.<sup>338</sup> California State University at Long Beach received federal funds to develop a KWIC index to its collection of California state publications, eliminate a cataloging backlog, and upgrade the main card catalog.<sup>339</sup> LC announced a new policy in description of monographs; to make the catalog record more universally usable, the physical description will reflect the publication as issued rather than as bound by LC.<sup>340</sup> The issue of serial or monographic treatment of conference publications was examined by Cole, who favored treatment as monographs.<sup>341</sup> The changing situation created by the advent of the computer will allow all but one of the functions of the catalog to be met without benefit of continued designation of main entry, according to Ayres, who offers main entry selected by computer as a time- and money-saving compromise.<sup>342</sup> Heinritz presents the decision table as a valuable aid in describing, understanding, and improving manual and automated library procedures.<sup>343</sup> Norman Stevens, a student and colleague of Paul Dunkin, reviewed his wide-ranging contributions to the literature of cataloging and bibliography, judged to be "likely to endure," and to the literature of librarianship, which "must be seen largely as amusing pieces."<sup>344</sup>

The Bath University Programme of Catalogue Research, intended to "act as a centre of communication for all kinds of UK catalogue research, both by undertaking practical studies itself and by liaising with other research groups and libraries," announced two projects "relevant to any library which is involved in or considering mechanized cataloguing": (1) a study in the Content And Sources of CAatalogue Data for local usE (CASCADE) and (2) an investigation

into the provision of Subject Access to Library Catalogues through Keyword INdexes (SALCKIN).<sup>345</sup> A description of CASCADE was provided.<sup>346</sup>

"Whither MARC and Mann?" was the topic of a jointly sponsored program of RTSD CCS, RASD, and the Public Library Association at the ALA Annual Conference.<sup>347</sup> DeJohn, Tighe, Weintraub, and Gorman spoke to the issue of whether the era of networks and the computer can be true to the traditionally cherished philosophy of cataloging, the doctrine received from Cutter and Mann, that cataloging must serve the convenience of the user, not that of the cataloger. At another meeting Urquhart charged that libraries were spending too much effort in achieving perfect cataloging rather than making books available.<sup>348</sup>

The RTSD CCS Cataloging Norms Discussion Group heard presentations from Landram of Georgia State University Library, Hughes of OCLC, and Byrum of LC on the application of quantitative and qualitative norms in their institutions.<sup>349</sup> In order to standardize reporting of cataloging so that meaningful comparisons could be made from one campus to another in the statewide University of California system, the Catalog Committee was charged with developing cataloging definitions upon which such standardized reporting could be based. Payne outlined the definitions, adopted in 1975, which are now considered to have stood the test of time.<sup>350</sup>

The many changes taking place in cataloging and classification work have caused technical services librarians to take a look at their activities. The RTSD Discussion Group on the Role of the Professional in Technical Services, organized in 1977, devoted its Midwinter meeting to a discussion of the effects of automation in technical services upon the librarian's role.<sup>351</sup> Chwe studied the comparative job satisfaction of reference librarians and catalogers in university libraries and found no significant difference in overall satisfaction, although catalogers were significantly less satisfied with three specific aspects of their jobs: creativity, social service, and variety.<sup>352</sup> At a recent conference on management issues in automated cataloging, Spyres-Duran contended that automated cataloging has eliminated the need for many professional-level cataloging positions, and staff cutting has been a by-product of the shift to automation; Berman took the opposite view, that automation has created a need for more and not less well qualified catalogers to improve mass production cataloging and create a local catalog that will make a library collection accessible to its users.<sup>353</sup> Wolf echoed his views, closing with a moral: "We have seen the library of the future, and it doesn't work without catalogers."<sup>354</sup>

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# **Developments in Copyright, Micrographics, and Graphic Communications, 1978**

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## *Copyright*

Nineteen seventy-eight, the new copyright law's first year of existence, might well be referred to by librarians as the year of adjustment. During the year the copyright office was deluged with unprecedented numbers of letters, phone calls, and visitors. About 50,000 applications received in the Copyright Office had not been processed as of September 1978, since they had omissions of required data or errors because of applicants' unfamiliarity with changes instituted under the new copyright law. As a result of this tremendous increase, the Copyright Office established two new divisions, and other divisions and sections changed names to reflect new responsibilities.<sup>1</sup> Many inquiries about the new copyright law caused the American Library Association (ALA) Association of College and Research Libraries (ACRL) Board of Directors to approve the establishment of an ad hoc Committee on Copyright Questions.<sup>2</sup> The Interlibrary Loan Committee of ALA Reference and Adult Services Division (RASD) is seeking documents related to interlibrary loan under the new copyright law. This material will go into a central clearinghouse operation.<sup>3</sup> The ALA Legislation Committee formed and charged a new ad hoc Copyright Subcommittee "to set up and implement a mechanism for monitoring the effects on library services of compliance with the new copyright law, in preparation for the five-year review by the Register of Copyrights . . ."<sup>4</sup> ALA wants the review to include assessment of the various copyright clearance mechanisms and seeks to broaden the review to include all forms of communication. The ALA Legislation Committee suggested "that ALA urge publishers to adopt and include in journals a notice spelling out their policy with regard to educational copying, and

urged that scholarly authors reserve to themselves licensing and reproduction rights to their own works."<sup>5</sup>

Jerome K. Miller, University of Illinois, is seeking policy statements from different kinds of libraries for a copyright policy study.<sup>6</sup> The register of copyrights announced her intention to appoint an eight-member advisory committee to assist her in the five-year review of the law.<sup>7</sup> The final report of the National Commission on New Technological Uses of Copyrighted Works (CONTU) states that the new copyright law should be amended to (1) "make it explicit that computer programs . . . are proper subject matter of copyright, (2) apply to all computer uses of copyrighted programs . . . , and (3) assure that rightful possessors of copies of computer programs can use or adapt these copies for their use."<sup>8</sup>

The Council of National Library Associations' (CNLA) ad hoc Committee on Copyright Law Practice and Implementation suggested to the register on the proposed rule making that it define the location of the copyright notice in all types of publications. The committee urged that the number of acceptable locations be held to a minimum so as not to increase the labor of searching for copyright notices by library staffs.<sup>9</sup> The Copyright Clearance Center (CCC) got off to a "strong start"<sup>10</sup> early in the year with several publishers registering hundreds of periodicals and with the center issuing its first publishers' fee list. By the end of the year, however, the CCC had reported to the publishing industry a financial crisis "so severe that it may have to shut down its operation by February of 1979."<sup>11</sup>

An interesting battle developed during the year between the publisher/author and library communities. The confrontation was over the interpretation of the new law as it relates to photocopying. CNLA says the majority of photocopying done by libraries is legal, that permission will not need to be sought from the copyright holder, and that libraries can still make one copy of something for patron use or for interlibrary loan.<sup>12</sup> The Association of American Publishers (AAP) and the Authors League of America (AL) formulated some guidelines for photocopying by corporate librarians because, according to the AAP leaders, "the library associations refused to meet with the publishers and authors to formulate 'comprehensive guidelines'." The document threatened to develop similar guidelines for academic librarians. AAP/AL asked the Special Library Association (SLA) if their membership roster could be used to mail out this document and SLA refused. CNLA quickly issued its own statement charging that the AAP/AL document contained statements that are in conflict with the record.<sup>13</sup> Later, responding to pressure from publishing organizations for strict compliance with their version of the new copyright law, ALA sent a stern letter to individual members of the AAP setting forth again the library position on copyright and asserting "that AAP and AL were out of line in taking it upon themselves to publish copyright guidelines for libraries."<sup>14</sup> Publishers continue to press librarians to

negotiate guidelines on photocopying while librarians are calling for clear documentation of the effects of the law before they enter into further discussion with publishers.

During 1978 there were several conferences, workshops, and seminars held throughout the U.S. dealing with various aspects of the copyright law. "Copyright and Networks," "Virginia Libraries, and the Copyright Law," "Legal Requirements, IRS Regulations, Copyrights and Privacy in Micrographics," "The New Copyright Act and its Legal, Ethical, and Practical Implications," "Ramifications and Implications of the Revised Copyright Law," "Fair use, Photocopying, and Management of Collections," and "Ethics and Accountability in the Fair Use of Multi-media Material" are representative titles. Sponsoring organizations represented a cross section of professional associations, universities, and government agencies.

Considerable information about various aspects of the new law was generated during the year. Monographs included a handbook on the law; guidelines for educators, school library media specialists, and visual artists; information about fair use; photocopying; and protection of literary, musical, and artistic works.<sup>15</sup> A new periodical came into being, the first issue of which touches on use and abuse of library-related photocopying.<sup>16</sup> A sound filmstrip on the new copyright law was made available<sup>17</sup> as were some copyright teleconference tapes.<sup>18</sup>

Test cases were held during the year. One example is a school district in New York that was found guilty of violating copyright laws by doing off-the-air recording without permission.<sup>19</sup> The question of whether computer programs can be copyrighted is still unanswered. The Supreme Court handed down a decision, *Parker v. Flook*, indicating that a patent could not be granted to a computer program. Congress may have to decide what sort of protection should be given to computer programs to prevent unauthorized use by others.<sup>20</sup>

#### *Macrocopying (Full Size)*

Informal reports from librarians indicate that the new copyright law has had varying effects on photocopying service. There may be other variables working besides the new copyright law, but some librarians say photocopying volume was considerably down in 1978 as compared to 1977. Others say business greatly increased, and some report no difference.

Each library is coping the best it can. Interpretation of the law is the major issue. Some libraries look to their national associations for help. CNLA continues "to urge all parties to abide by present photocopying guidelines."<sup>21</sup> At the 1978 Annual AAP Meeting, Robert Wedgeworth, executive director of the ALA, said, "As I travel around the country and talk to librarians, I know that they are not out there trying to rip off publishers and authors. They want to provide a service and are making a great effort to comply with the copyright law. There are no

simple answers to some questions in the new law. We have done everything we could to prepare our people for the new law."<sup>22</sup> At the Special Library Association Annual Conference, Arthur Levine advised librarians "to adopt a 'wait-and-see' policy and keep records."<sup>23</sup> Two pamphlets were published early in 1978 by the AAP that caused considerable controversy. These pamphlets<sup>24</sup> purport to explain the new copyright law as it applies to libraries. A warning, highlighted by examples, that "they in fact contain distortions of fact and misrepresentations of the law and its guidelines" has been published by ACRL.<sup>25</sup> The same article includes a statement from ALA that "librarians should remember that unilateral guidelines, independently issued, have no validity under the law. Our present responsibilities are (1) to live with the law and guidelines as they were approved by Congress and as they exist today, and (2) to develop recording, documenting, and reporting procedures for the five-year review by the Register of Copyrights mandated by section 108 (i)."<sup>26</sup> The ACRL also approved this statement.

One area of photocopying in which libraries are vitally interested, in view of the new copyright law, is that of reserve materials. Some helpful guidance can be found in the 1978 literature. Charles Martell offers a relatively detailed interpretation of the law from the reserve operation point of view.<sup>27</sup> Meredith Butler conducted a survey of twenty-seven selected university, college, and community college libraries in New York State in an attempt to establish the effect of the new law on library reserve operations.<sup>28</sup> John C. Stedman shares some pertinent thoughts, definitions and guidelines on library reserves, photocopying, and the copyright law.<sup>29</sup> Robert Wedgeworth touches on library liability with regard to copyright and reserve materials. He warns libraries "that the mere possession of illegal copies could be infringement of the law."<sup>30</sup> Wedgeworth also identifies a soon-to-be-issued pamphlet, written by two law librarians, which examines, among other things, how the law affects reserve collection policy.<sup>31</sup>

Photocopying for interlibrary loan operations is another area of high interest for librarians. Most librarians have adopted a version of the ALA Interlibrary Loan Committee's approved ILL form that includes a warning concerning copyright restrictions. Since photocopies are not the only reproductions patrons can make of library materials, RASD's ILL Committee added the words "or other reproductions" to its recommended notice to be posted on unsupervised reproducing equipment.<sup>32</sup> Whether the copyright law has affected the volume of ILL transactions is questionable. The Beloit College Library is making a concerted effort to decrease the volume of business indicating that "the new copyright law will force it to make sure the interlibrary loan requests sent to [it] are justified." To cut down on ILL requests, the library stipulates that requests carry a faculty signature.<sup>33</sup> A computer program that will inform a library when it has violated, or is in danger of violating, the fair-use provisions of the copyright law, has

been developed by the Washington University School of Medicine Library. The program, key-punching forms and documentation, is available to libraries at a cost of approximately twenty-five dollars.<sup>34</sup>

Major implications for interlibrary loan, library reprographic services, and copyright compliance are connected with the proposed National Periodicals Center (NPC). On-demand publishing would not only use reprographic technology but would likely have implications for national bibliographic systems. There has been talk for some time about establishing a national periodicals center, and a major step was taken during 1978 when *A National Periodicals Center Technical Development Plan* was published. This report, which has received much attention from all areas of the library profession, is available from the Library of Congress. A summary article, containing a brief history of the development of the report itself, of the concept of a national periodicals center, and the purposes, program, and parameters of the concept, may be of interest to the reader.<sup>35</sup> Related to this plan is proposed action to create a National Library Agency (NLA). The Association of Research Libraries (ARL) membership voted to endorse the "Statement of Principles for Congressional Action to Establish a National Library Agency," which was initially drafted by representatives of ARL, the Association of American Universities, and the Center for Research Libraries. The statement indicates an "awareness that, if the nation's libraries hope to achieve certain objectives which are logically national in character, such as a national periodicals center . . . , a national library agency capable of accomplishing these objectives must be created."<sup>36</sup>

Getting a reading on the photocopying industry by studying the literature is difficult. There were a few developments that will likely impact reprographics in the next few years. Sales of convenience copiers will continue to rise. Intelligent copiers—combining the properties of copiers, digital computers, and phototypesetters—will show slower growth to begin with, but will pick up with time.<sup>37</sup> Fiber optics is the most significant development. Fiber optics copiers are being produced with a resolution of seven lines per millimeter. In the words of Charles R. Dillon: "A tightly-packed bundle of fiber optics tubes thick enough to cover a computer video display tube will send images from the display to the imaging surface of a copier. With this accomplished, the copier becomes a device to be plugged into an information network, and it can eventually be used as a printer home copier, as part of the office-of-the-home concept."<sup>38</sup> The Minolta Electrographic 301, an example of a fiber optics copier, uses a monocomponent toner and pressure-fuses the toner to the paper. For a low-volume copier, the notable advantages are the purchase price (\$1,995) and size (ten inches by 32 inches by 19 inches).

Test reports for the following photocopiers were published during the year: Canon NP-L7, Canon NP-5000, Dennison BC-22, A.B. Dick 901, Kodak Ektaprint 100, Minolta Electrographic 101, Pitney Bowes

PBC, Savin 780, Saxon 3, and 3M VQC III.<sup>39</sup> Besides comprehensive test and cost information on these photocopiers, the same publication includes information about the copier industry, copying processes, purchase vs. rental, features to consider, evaluation criteria, coin-op copiers, and toners for photocopiers. The Minolta Corporation claims that it has the "lowest-cost reducing copier on the market that provides a copy with plain-paper quality," in the Electrographic 201.<sup>40</sup> Toshiba America, Inc. announced a new plain paper copier that utilizes the dry toner process and is designed as a desktop copier. The ToshibaFax BD-601 copies from books and three-dimensional objects as well as from flat sheets. The paper supply is fed automatically from a cassette and is adjustable for either legal or letter size.<sup>41</sup>

Color photocopying continues to be recognized for the number of applications available. The Visual Graphics Corporation raves about "the revolutionary new camera/processor that produces full color stats and full color overhead transparencies in minutes . . . without a darkroom or plumbing."<sup>42</sup> An interesting application of color photocopying is described by Clawson and Rankowski. In cooperation with the Department of Library Science, Villanova University, C-E Refractories Research and Development Library developed a system for using color Xerox for the purpose of cataloging slides.<sup>43</sup>

#### *Microform Materials and Micropublishing*

The permanence or life of microform materials received considerable attention during 1978. Four items speaking to the long-debated question of the type of microform that is most suited for storage and retrieval of information in a library setting, are noteworthy for different reasons. Adelstein's significant contribution discusses factors in film preservation, film type, processing requirements, and storage conditions.<sup>44</sup> Avedon elaborates on the "keeping characteristics" of microforms.<sup>45</sup> Spaulding and the U.S. Government Printing Office (GPO), though contributing little new information, present some interesting arguments regarding the matter. Spaulding says that "the problems brought to surface by the proliferation of nonsilver film in libraries have convinced me that libraries must change their conceptions of microforms and the way they are kept and used."<sup>46</sup> The GPO report by Materazzi discusses the physical characteristics of different film types. The report argues that diazo is adequate for library needs and that the decision to furnish diazo microfiche to U.S. Government depository libraries was sound.<sup>47</sup>

Librarians who are tempted by the Spaulding and Materazzi contributions to stop paying so much attention to the silver vs. nonsilver controversy and, indeed, even to increase the number of nonsilver microforms in library collections will do well to remember that earlier studies have shown conclusively that all diazo material will perish after varying lengths of time, no matter how good the storage conditions. It is significant that silver materials *may* perish, but diazo *will*. Materazzi's

contention that the greater stability of silver film is outweighed by the greater durability of diazo film is countered by the existence of a number of collections of silver microfiche that have survived several years' use.

The controversy revolving around the U.S. Government Printing Office (GPO) is a two-part problem related to its micropublishing program: (1) whether to offer publications to depository libraries in silver and diazo fiche and (2) whether to micropublish documents already being published by commercial firms. The second question will be discussed later.

During the 1978 ALA Midwinter Meeting, five ALA committees passed resolutions recommending that libraries add only films with established standards for archival permanence to their permanent collections and that the GPO offer to selective depositories the option of silver-halide film for all micropublications distributed through the depository system.<sup>48</sup> In August, the GPO published the Materazzi report. Although it is an impressive document, one must remember that it was issued after the decision to switch to diazo film had been made. Librarians perhaps would have viewed the initial decision more favorably if the report had preceded rather than followed the decision, which was reached without any public report on the problem of film stability. For the present at least GODORT is not pursuing the matter, and in October, the Depository Library Council passed a number of significant resolutions related to this matter, one of which resulted in a notice to depository librarians dated October 30, 1978, that "effective immediately regional depositories would no longer receive a dual distribution of silver halide and diazo depository microfiche. Only one copy of diazo fiche would be furnished. Regional depositories may keep the silver-halide microfiche which they have already received. However, if they don't want them they were asked to return the unwanted fiche to GPO for salvage of the silver salts contained in the fiche."<sup>49</sup> Librarians will receive some type of diazo fiche if they select documents in microformat from the GPO. One cannot help but ask the question, To what degree has economics influenced the recent move toward nonsilver materials?

A noteworthy proposal outlining the characteristics of a coordinated national program for the prevention of microform literary resources was made by Charles Willard at the Boston ACRL meeting.<sup>50</sup> The paper is a well-thought-through proposal for a national master negative storage center as a means of assured access to deteriorating library materials. It also describes "elements in an aggressive, national microform program . . . involving . . . facets of library operations from acquisitions through cataloging to public services, including interlibrary loans."

Some "new" film was introduced during the year. GAF's black diazo 2612 film, a medium-speed, ultra-high density film, is specifically designed for duplicating silver and diazo films.<sup>51</sup> Eastman Kodak's

photoconductive recording film SO-101 is a room-light nonsilver-image film with capabilities for adding images after the film has been fixed.<sup>52</sup> Fuji's Fuji-Com SE is an extremely fine grain emulsion with ultra-high resolution designed for high reduction CRT recording.<sup>53</sup> DuPont's DuPont Recron High Definition COM silver film has a new emulsion that produces easy-to-duplicate images in reductions of 42 $\times$ , 48 $\times$ , and higher. The film comes on a CRONAR® base protected with a new antistatic treatment. The base is .004 inch thick and up to 25 percent thinner than conventional acetate COM films.<sup>54</sup> The first vesicular microfilm to be produced commercially by a European company—Bexford Ltd.—is slate-blue and is designated VP 61.<sup>55</sup> Eastman Kodak has introduced two films. Kodachrome 40 film 5070 (Type A) process k-14 will replace Kodachrome II Professional film (Type A). The second, appearing in the most recent packages of 5071 35mm duplicating film is an improved stock with an increased dark storage life, which is said to approach that of Kodachrome's 50-plus years.<sup>56</sup>

The use of color microforms continues to grow. George D. Hoffman points to the advantages of using color in the recording and transmitting of information and discusses several applications of this medium.<sup>57</sup> M. J. Gunn suggests some problems of color microfilming and concludes: "Leaving aside for the moment the very real problems of resolving power and dye-stability, the most serious obstacle facing users . . . of colour microforms would appear to be the absence of a suitable industry standard. . . . It is clear that more material is being published in colour microform now than at any time previously and the existence of an industry standard is therefore most desirable."<sup>58</sup> Ed Scully says that "color-image fading is a potential economic nightmare . . . and one of the realities of the color fading problem is that it doesn't affect everyone."<sup>59</sup> He emphasizes that fading is inevitable, but gives several hints on how to slow it. In a joint project with the Japan Microfilm Service Centre in Tokyo, Hitachi has developed a method of increasing the life of color images by storing them on black and white film. It is accomplished by inserting a stripe filter between the lens and the film of an ordinary microfilm camera.<sup>60</sup>

Last year's review article included a paragraph about a process that is said to make fragile emulsion of silver film scratch and abrasion resistant. The author received considerable correspondence about the matter and was relieved that many questions about the process were answered. Microfilm around the world has been treated with evidently satisfactory results. All of the correspondence with attached documents, including test results and testimonials by companies using the process, was turned over to the chairman of the ALA Micropublishing Committee to be made a part of the archives of RTSD. This offers one address to which people may write for information about the process, since committee chairpersons change regularly.

Considerable attention is being given to preservation of photographic

images. "A century's worth of America's photographic heritage is in danger of disappearing forever . . . from museums, archives, and personal collections. . . ." That message came out of Graphic Arts Research Center (GARC) seminars held during the year.<sup>61</sup> These seminars are one indication that there is keen interest in preserving and restoring photographic images. Other indicators are the courses taught at institutions of higher education in photographic history, books written on the subject, and the increasing number of serious collectors of old photographs. Recently, the American Archives of the Factual Film was established at Iowa State University to provide a place to preserve and protect the films themselves, as well as the relevant literature, scripts, promotional materials, and other original print media related to these films.<sup>62</sup>

A quick look at the micrographics industry may be interesting. 3M acquired Photomedia Co., a privately owned vesicular film manufacturer, thus increasing 3M competition with Kalvar and Xidex in the duplicating film business.<sup>63</sup> British Leyland decided to terminate its PCMI ultrafiche contract with NCR in favor of a 48× system that was scheduled to begin in September of 1978.<sup>64</sup> This will probably be the demise of PCMI ultrafiche. The American Chemical Society and the Chemical Society of London both began new programs using micrographics. The former began accepting subscriptions to its Customized Article Service on microfiche along with hardcopy tables of contents of all journals published by the society. The latter began a new journal in which only the synopses of articles are printed, with the full article available simultaneously on microfiche.<sup>65</sup> *Infosystems'* eighth annual survey showed steady but not spectacular growth in the use of micrographics in data processing during the year.<sup>66</sup> Another survey, conducted by the scientific, technical, and medical publishers, attempted to discover publishers' attitudes toward microforms. Replies received from fifty-three publishers of 1,427 journals showed "that 42% of the journals involved had publishers who were negatively inclined to producing microforms for current issues, 39% were positive and 5% were already or about to produce in microforms. Publishers of 47% of the journals doubted that the scientist would ever completely accept microforms."<sup>67</sup>

The battle between public and private micropublishers became even more heated in 1978. The U.S. Government's micropublishing program is in full operation. The 1,217 authorized depository libraries in the U.S. may now choose to receive at no charge a number of documents in either microform or hard copy. Commercial micropublishers have fought hard to restrict the GPO's micropublishing program, since they have been selling selected microform documents for years. Since the GPO has determined to go ahead with its plans, commercial micropublishers will most likely mount a lobbying campaign to limit or stop the program. Both sides have reasons for thinking they are right.<sup>68</sup> (Recent word is that at its January 12, 1979, meeting, the Pub-

lic Printer's Council on Micropublishing passed a resolution recommending that the public printer limit the implementation of the GPO micropublishing program to those items, which are not currently offered in satisfactory form in the marketplace, pending clarification of the role that the Title 44 revision effort will play in addressing basic issues.)

An overview of the international microfilm situation by D. W. McArthur,<sup>69</sup> may be of interest. The use of micrographics is in a period of growth everywhere. Africa and South America tied at 25 percent as the fastest growing areas of the world in 1977. Europe was the slowest at 14 percent. In terms of size of the microfilm market, however, the U.S. has 66.7 percent, Europe has 20.2 percent, South America holds 3.4 percent, Japan has 3.2 percent, and Africa claims 1.6 percent. An interesting sidelight coming from another source projects that on a per capita basis Australia may lead the world in volume of micrographics usage.<sup>70</sup>

In spite of the seeming rapid growth of the use of microforms, Joe R. McDaniel says that microforms are past their prime. Why? Because of the computer. In his words: "I estimate the cost of storing a report on-line on disk is approximately \$.01 per page per month. It costs about as much, assuming a full fiche, to write reports on microfiche. (This is for the master. Copies are at least an order of magnitude lower in cost.) . . . In terms of availability of reports . . . the advantages of on-line storage become magnified. . . ."<sup>71</sup> He also shows that it is less costly to read a report from a terminal than from microform reading systems. A more optimistic look at the industry is given by Richard J. Conners. He says that independent studies estimate the industry is growing 18 percent annually. "These same studies show micrographics as a billion-dollar industry in 1977, \$2.1 billion in 1980 and \$5 billion in 1985."<sup>72</sup> A new Micrographic Industry Marketing Information Service that provides micrographic industry market data began in 1978.<sup>73</sup>

A sampling of 1978 micropublications may give an indication of where the micropublishing activity was. A publication format that is becoming more popular is the combination of printed abstracts with microfiche of the corresponding full text packaged in a hardbound book format.<sup>74</sup> The American Chemical Society began publishing CHEMTECH in color microfiche, making it the first technical publication to be produced simultaneously in paper copy, black-and-white microfiche and color microfiche.<sup>75</sup> A newsletter published irregularly in microfiche appeared in 1978.<sup>76</sup> The *Washington Post*, both current and retrospective issues, became available in January 1979 on 35mm microfilm from Research Publications.<sup>77</sup> The entire contents of the Her Majesty's Stationery Office Controller's Library collection of official British government documents published during the years of 1922-72 was micropublished in June 1978.<sup>78</sup> The *LC Shelflist* consisting of 6.8 million cards is available on microfiche from University Mi-

crofilms International and on microfilm from Carrollton Press. Congressional Information Services, Inc. (CIS) has announced the publication of part I of its twelve-part *CIS U.S. Serial Set Index, 1789-1969* and companion *CIS U.S. Serial Set on Microfiche*.<sup>79</sup> A number of declassified government documents have been put on microfiche and released as the *Central Intelligence Agency's Reference Aid Series*.<sup>80</sup> A collection of medieval manuscripts in the Bodleian Library became available in microform.<sup>81</sup> The quality of this product is outstanding.

The NMA continues to be a positive force influencing the industry. A long-range task force has recommended to the NMA executive board that the association allocate 25 percent of its resources by 1983 to foster interface with other information processing technologies.<sup>82</sup> NMA's membership totals close to 9,200, a slight increase over the year before. The annual conference and exposition continues to enjoy large numbers of attendees (over 10,000 in 1978) and exhibitors.<sup>83</sup> The 27th Annual Conference and Exposition had five preconference seminars covering topics centered around micrographics systems. Twenty-four educational sessions offered suggestions for getting the information to the user, and 134 exhibit booths displayed the latest development in equipment and systems.<sup>84</sup> NMA's revenues in 1978 were up 19 percent from the previous year.<sup>85</sup> The 23rd Annual Conference of the Association of Records Managers and Administrators (ARMA) emphasized micrographics. Out of fifty-two exhibits, thirty-four showed micrographic or micrographic-related products. Three program sessions were completely devoted to micrographics. ARMA had a record attendance at its 1978 convention.<sup>86</sup>

Clearwater Publishing Co. established International Microform Distribution Services, a clearinghouse for foreign microforms, which sells titles at foreign list prices and also distributes catalogs of foreign publishers to libraries.<sup>87</sup> The Copyright Office of the Library of Congress has approved depositing 35mm microfilm in lieu of two copies of the best edition of each newspaper registered for copyright.<sup>88</sup>

#### *Micrographic Equipment and Processes*

Libraries can lure dollars for micrographics equipment. The alumni of Shippensburg State College in Pennsylvania came to the aid of the library and donated enough money to purchase several microfilm readers for the microform reading room.<sup>89</sup> This bit of news is included simply as a reminder that organizations will contribute money to buy something besides books for libraries.

Reporting what is new can be tricky because at times what is "new" is not really new. Norman Goldberg warns that after visiting "the booths of over 30 lens firms exhibiting materials giving details on 113 'new' lenses . . . I eliminated 51 lenses from the 'new' category . . ."<sup>90</sup> An example of this is the "new" Eastman Kodak Trimlite microform reader series shown at NMA in 1978.<sup>91</sup> It is manufactured by Alos A. G. Switzerland, has been exhibited repeatedly at NMA by its

manufacturer, and at the same time has been distributed in Europe by Eastman Kodak for years.

Equipment exhibited at NMA's 27th Annual Conference and Exposition included some new items as well as some upgraded products. Microfiche COM readers in  $\frac{3}{4}$  size were popular again this year. Datagraphix introduced its DataMATE 175 reader as a desktop unit in a choice of magnifications. The items in Micron's 750 COM reader series have a common base with interchangeable hoods providing  $24\times$ - $48\times$  blowbacks. These modular readers boast of a "power drawer" housing electrical equipment that slides out for easy parts replacement. Micro Design's Comet has an  $8'' \times 10''$  base, is fanless, has an  $11'' \times 8''$  screen, floating drop-in lens, and a "power drawer." Bell & Howell introduced the SR-20 fiche viewer with an  $11'' \times 8\frac{1}{2}''$  screen, interchangeable lenses, and long-life lamp. Quantor's Model Q-304 reader provides high-resolution images and occupies  $7\frac{1}{2}'' \times 14\frac{3}{4}''$  of desk space. Other readers included Micro Design's model 960 fiche reader with a  $14'' \times 11''$  screen that complements other 900 series readers and a front projection curved screen; Quantor's Model 318 fiche reader has a  $12\frac{1}{2}'' \times 10\frac{1}{2}''$  screen with  $24\times$ - $72\times$  magnifications; and Realist's FP-14 reader boasts of a  $14'' \times 11''$  screen that is adjustable to four positions.

Reslabs introduced its Model RL-120 fiche reader designed for all COM and source document applications. It offers interchangeable nonglare different color screens, a variety of drop-in lenses, low noise level and smooth ball bearing carrier system. Wadleigh Manufacturing's future contribution to the rollfilm reader market is Superstar 16-35mm front projection screen, all manual film drive, fanless cooling reader. This reader was scheduled to be available in table and free-standing models in the first quarter of 1979.<sup>92</sup> Kinderman & Co. of Germany introduced its FR-IV fiche reader with a screen large enough to view two DIN A four pages at a time. This enables complete computer printouts to be read at one time.<sup>93</sup> Dukane's new MMR 16 + 35 reader has a  $14'' \times 14''$  screen and offers five interchangeable lenses.

There is still a need for portable or lightweight microform readers. According to a small market survey conducted by Realist, Inc., 69 percent of 214 people surveyed while attending NMA Convention in Boston said that they have portable microfiche reader applications. "While not a scientific survey . . . the results are in line with other studies confirming the trend to portability," says the editor of *Micrographics Newsletter*.<sup>94</sup> The following portable microfiche readers were evaluated by the National Reprographic Centre for documentation (NRCd) early in the year: Agfa-Gevaert LF 202, Bell & Howell Commuter, Microphax Executive, Microphax Informant, MISI Monitor and the Saul compact f.<sup>95</sup> In the "briefcase" format are the Savemo L.E.M. microfiche viewer, which will operate on 220 volts, 110 volts, or on battery power, the Agent by Realist, and the Topper that takes

fiche jackets and aperture cards and will operate on 115 volt AC or 12 volt DC (an auto cigaret lighter adapter is available as an option). Other portable units introduced during the year include Visidyne's Show-Kit (for full-size reproduction of COM fiche) and Micro-Kit (for  $\frac{3}{4}$ -size reproduction of COM images); Microfilm Enterprises Marketing's 16mm rollfilm reader to be used either with standard current or with rechargeable batteries; Western Reserve Electronic's Smarte I 16mm rollfilm reader weighing 20 pounds and operating on standard current or rechargeable batteries; and Embuson of England's Portaview and Pentabox fiche readers sharing a number of common components.

Remember the "Fly's Eye" reader concept that made considerable news some years ago? This was to be the system that was to produce a reader for as little as \$5. According to one report, IZON has models of this system ready for production and is looking for capital. The company "has both a manual unit, the M200 Reader with a 7"  $\times$  9" screen using an 8"  $\times$  10" film, and an automated version. In addition, the company has a 5"  $\times$  5" Izette model, which uses a Super-8 microfiche and which it calls the microform equivalent of the paperback book. The M200 . . . might sell for \$275 (a far cry from the original \$5) when manufactured in quantities of 500 . . . while the Izette price could be in the vicinity of \$50 to \$75."<sup>96</sup> It must be kept in mind that this reader is not compatible with existing microfiche. Carmine Masucci, vice-president of IZON, says that it will take at least \$3.5 million to go into production. One estimate is that given sufficient funds, IZON could produce these units in the spring of 1979.

Hand-held viewers are still being manufactured. D. O. Industries advertised the Easy Reader and the Exac-Tics Reader. Keyan Industries added two more hand-held viewers to its line that operate on flashlight batteries and bulb. Both companies have readers for aperture and fiche viewing.

An interesting reader concept comes from a new company, Microform Communications International, Ltd. Keith Lithgow designed the Fichette projector, which "is a lightweight unit not unlike a modern ciné camera in general appearance. It accepts individual fiche, jackets, aperture cards or film strips and has a click-stop frame-to-frame movement. Lens options comprise 20 $\times$  and 42/48 $\times$ . As well as being usable as a free-standing projector, the Fichette can be supplied in a suitcase incorporating an integral screen or even with a pistol grip holder of the type used on ciné cameras. The facility for handling 105mm rollfilm is probably the most intriguing aspect of the design. The Fichette rollfilm cassette is a slim unit with a gate down the middle wide enough to display one column."<sup>97</sup>

Readex Microprint Corporation introduced its Model 7 Opaque Viewer designed to accept all opaque microforms up to 6"  $\times$  9". Most probably the first new reader for opaque microforms produced since 1967, it offers two magnifications and a 12"  $\times$  16" screen. A letter

sent to librarians from the president of the company says that \$125 allowance will be given per machine on any version of the old Model 5 opaque reader that is returned to the plant for each Model 7 that is purchased at \$795. Now if only a microprint reader/printer would become available, many librarians would be happy.

Reader/printers shown at NMA's 27th Annual Conference and Exposition include the IMTEC 2000, an 18" × 24" tabletop model, printing sizes from A2 to A5; the Minolta RP407 making four copies per minute in sizes up to 11" × 17"; the Quantor 412 featuring an 11" × 14" screen and using 200-sheet suction-fed paper cassettes to produce three different copy sizes; the Quantor 406 with an 8½" × 11" screen that produces one-size copies; the Bell & Howell Autoload III, a direct drive unit accepting rollfilm and cassettes and featuring a zoom lens and full 360-degree image rotation and side-to-side scanning; the Bell & Howell Autoload 650 with drop-in lenses also taking rollfilm or cartridges; the attachment for MISI's 21st Century Microfiche Reader/Printer that makes the unit a universal RP with image rotation and polarity control (all of these are zinc oxide, electrostatic, wet process copiers); the Oce' Industries' 3800 reader/printer, making copies on plain paper from aperture cards or 35mm rollfilm; and the Addressograph-Multigraph Model 1830 microfiche printer delivering fifteen prints per minute on plain paper. Micro Information Systems introduced a new series microfiche reader/printer, the series 2100, with adjustable size range and interchangeable lenses. A manual rollfilm adopter, image rotation, and bipolarity are available options.

The literature contained a number of articles about characteristics of microform readers and reader/printers. Leonard Lee provides "practical information and tested procedures to assist individuals responsible for selecting viewing devices,"<sup>98</sup> Charles Robertshaw gives "procedures for evaluating readers and reader-printers for various microform applications,"<sup>99</sup> and Kenneth Hansen "provides a step-by-step method by which to evaluate a reader-printer."<sup>100</sup>

Medium-to-high-speed microform duplicators appearing at the NMA 27th Annual Conference and Exposition were the 3M Duplifiche Model 562 featuring an optional collator; the 3M Duplifiche Model 572 (for cut fiche or scroll masters); the 3M Model 407 diazo aperture card duplicator; the Dietzgen series including the 4335D (diazo), 4335V (vesicular), 4335SC (silver), and V-DM and SZ-VM (dual-capability models); the Xidex Model 1260 rollfilm duplicator for vesicular duplication; the Quantor Model 202 fiche duplicator available in both diazo and vesicular models; the Photomatrix Model 100 EX-collator, an optional accessory for use with Photomatrix Series 800 and 900 fiche duplicators as well as others; the Addressograph-Multigraph OP90/99 "intelligent" variable distribution microfiche duplicator, a microcomputer-controlled duplicator; a series of vesicular and diazo rollfilm or cut fiche duplicators, the DataMASTER Models 100, 150, and 200; the GAF 16/35mm NV rollfilm duplicator; and the

Micobra M-1 rotary fiche duplicator that duplicates onto diazo or vesicular film. Low-volume fiche duplicator equipment of more immediate interest to librarians appearing during the year includes the Metro/Kalvar Fichemake, a simple two-unit machine for duplicating microfiche on vesicular-type film,<sup>101</sup> and the Fichemake printer and developer by NT Audio Visual Supply, Inc., designed to produce copies from silver, vesicular, or diazo originals.<sup>102</sup>

A microform shredder, the micro 006 from Datatech, is a high speed film destroyer capable of shredding two fiche per second or three reels simultaneously at a rate of sixty feet per minute. The machine, which shreds film into unreadable particles, comes with a stand.<sup>103</sup>

Microform readers have been called viewers and terminals as well as other names. One company used the word "displays" to describe its microfiche readers.<sup>104</sup> Is this an upgrading by terminology?

Two of the microform cameras shown at NMA 27th Annual Conference and Exposition are the Dietzgen automatic step-and-repeat camera with a built-in titlemaking system and the 3M SRC 1050 step-and-repeat camera that uses dry silver technology and has an automated computer-forms feed attachment.

Just as Readex Microprint will take trade-ins of older models on its new one, Bell & Howell is also advertising that it will take all models as trade-in regardless of age, make, or condition for its MICRO PHOTO 16·35 Microfilm Reader.<sup>105</sup> Kim Tamvakakis of Datek Equipment, Inc., Atlanta, says his company is in business to purchase used micrographic equipment worldwide. Machines acquired this way are reconditioned and sold.<sup>106</sup>

A "copy-thru" white-striped diazo microfilm, which enables users to reproduce titles when a duplicate microfiche is used to make subsequent copies on either striped or unstriped microfilm, has been developed by Bexford. The stripe accepts written or typed characters and requires no modifications to existing duplicating equipment.<sup>107</sup> Extec Microsystems sells a film cleaner made by Kinetronics of Illinois, Model 6105, which is supposed to remove dirt through a "lifting" action. The tabletop unit can be operated in a dry or wet mode and costs just under \$2000.<sup>108</sup>

#### *Application, Audiovision, Facsimile*

More libraries are converting from card and book catalogs to computer-output-microform (COM) catalogs. A sampling of these includes Western Kentucky University, which links patrons with an on-line circulation system;<sup>109</sup> University of Guelph Library, which will provide access to monographs by inquiry terminals or author/title and subject catalogs on microfiche;<sup>110</sup> the Denver Public Library, which is putting its book catalog on both microfilm and microfiche;<sup>111</sup> and the Anoka County Library, Blaine, Minnesota, which is changing its book catalog to microfilm.<sup>112</sup> The University of Southampton Library has

decided to change over from using COM film to COM fiche. The reasons for making the changes are said to be "the fact that microfiche readers were thought to be generally superior in quality and design to equivalent film readers, [and] that problems were foreseen in housing film cassettes as the catalogue continued to grow."<sup>113</sup> A report on the future of the Cornell University Libraries card catalogs recommends that the catalog be closed when AACR 2 is adopted and "that a new on line system with a COM backup system be implemented [which] would also manage the Libraries' other processing tasks. . . ."<sup>114</sup> This report represents one of the most comprehensive documents published so far on closing the card catalogs in a major research library. AMIGOS Bibliographic Council has issued the final report of a microform catalog study conducted in five Texas libraries.<sup>115</sup> The report studies patron and staff views of using microfilm.

Baker and Taylor Co. offers a package of library automation services called LIBRIS that includes a COM catalog, on-line acquisition system, machine-readable cataloging, and an automated buying system. The catalog service converts a library's card catalog to COM fiche or rollfilm output. The process accepts a variety of input media.<sup>116</sup>

Noteworthy applications include the use of a color microfiche-tape cassette package in a self-instructional course in elementary accounting,<sup>117</sup> the use of micrographics as a "bridge" to information for people with visual impairment,<sup>118</sup> and the development of a microfiche set of topographic maps.<sup>119</sup>

At the meeting of the British Computer Society Microform Specialist Groups, Peter Waterworth discussed the theoretical and practical problems of holographic recording and replay systems.<sup>120</sup> The Museum of Holography of New York City assumed publication of *Holosphere*, the newsletter of holographic science, technology, and art.<sup>121</sup>

We're seeing more and more interaction between computers and microforms. John M. Lusa says that "the next few years may be the 'Computer Age' for the users and vendors of micrographics. There are three computer-related trends that are underway. One is solidly entrenched, while the other two are in the initial stages and should see fruition during the next five years. The first trend utilizes microform . . . as the output medium of a computer . . . the second trend involves the use of a minicomputer as sort of a front-end processor for the COM unit . . . the third trend is the use of on-line computer terminals with micrographic readers."<sup>122</sup> Eastman Kodak introduced "two new intelligent micro-image retrieval terminals that can be used as stand-alone units or on-line linked to a host computer through a terminal interface. The IMT-150 is a reader-printer and the IMT-100 a reader only, but both employ an advanced microcomputer-based control system for memory, control and diagnostic logic . . . By linking its new terminals with the Word Machine, Kodak is attempting to overcome what has been a major obstacle to

the growth of micrographics—the awkwardness of finding what has been stored."<sup>123</sup> New equipment from Quantor "will merge 35mm slides of graphical representations with computer-generated alphanumerics—typically for parts catalog preparation and other micropublishing applications. The new 'graphics merging' option costs \$25,000, and is available only for use on the Quantor fiche recorders with front-end minicomputers, models Q115 or Q118."<sup>124</sup>

Storage applications are important. Microfiche envelopes, which claim not to degrade microfiche chemically have been announced by Curtis 1000.<sup>125</sup> General Microfilm Co. offers its easy-access fiche envelopes, which are open on one side as well as on the top for quick insertion and removal.<sup>126</sup> Associated Bag Company carries a complete line of microfilm jackets, sleeves, and microfiche sleeves. "The products are made of Mylar and all channels are ultrasonically welded."<sup>127</sup> Kleer-Vu Industries Inc.'s newest product is the Fiche-Jac, "a plastic jacket for fiche available color coded in a choice of 10 colors."<sup>128</sup>

The opening of the expanded Microform Reading Room at Boston University on May 10, 1978, received considerable press coverage. Credit for the expert PR work can be given to the vendor, University Microforms International, who acted as consultant for the project. This event was covered by popular library periodicals, records management periodicals, and by the *Christian Science Monitor* (which made an effort to collect and present information in addition to that in the PR handouts).<sup>129</sup> An event of even greater magnitude, the transformation of the Princeton University "cave" into a first-class microform facility, didn't enjoy the same press pageantry and indeed, wasn't even mentioned in the library literature.

The Library of Congress sponsored "an unprecedented information exchange conference for representatives of institutions collecting and archiving television programs" at which "the 45 conferees discussed acquiring, preserving, cataloging, servicing, and maintaining television collections."<sup>130</sup>

Considerable progress was made during this past year in almost every segment of video. According to Ken Winslow, "over the next ten-year period today's passive TV receiver will evolve into an active home entertainment/information/work terminal. . . . [An] emerging trend is the growing use of the miniature computer or microprocessor as an integral part of the new video technology. It is being designed into cameras, videotape/videodisc machines, TV monitors/receivers and all manner of wire and wireless distribution equipment. The microprocessor will perform alignment, operational sequences, monitoring, fault finding and maintenance routines."<sup>131</sup> The  $\frac{3}{4}$ " U standard videocassette introduced in 1971 has served education, industry, and, to a limited extent, homes but is now fading into history. The  $\frac{1}{2}$ " format has overshadowed it. Designed for home use, the original  $\frac{1}{2}$ " models are being upgraded for use in industry and education. According to Winslow, "The  $\frac{1}{2}$ " models in many respects perform as

well if not better than the first models in the  $\frac{3}{4}$  U format in the 1972-73 period. At the same time models in the  $\frac{1}{2}$ " videocassette format represent from two-thirds to one-half the cost of equivalent  $\frac{3}{4}$  U models, and there is every reason to believe that certain models will get cheaper . . . . Those who serve the present industrial/educational video user are led by the big Japanese three: Sony, Panasonic, and JVC. . . . One of the important things we are going to lose in exchange for the cost and performance advantages of the new  $\frac{1}{2}$ " videocassette formats is the widespread compatibility we have more or less taken for granted for 10 years. . . . We must face the fact that at the moment there are six separate and incompatible  $\frac{1}{2}$ " videotape cassette formats. While some are stronger than others, they are all struggling for position."<sup>132</sup> Features to look for in videocassette decks, according to *High Fidelity*, are automatic timer recording, remote pause, audio overdub, slow-speed option, automatic shutoff, switchable playback-output channel, stopframe playback, slow-motion playback, memory rewind, and fast-motion playback.<sup>133</sup> *Library Technology Reports* features an article on  $\frac{1}{2}$ " videocassette equipment for library use and gives comparative data on five record/playback machines: JVC HR-3300U (BETAMAX); Sony SL-8200 (OMNIVISION II); Sony SLO-320 (BETAMAX); Sony SL-8200 (BETAMAX); and Sanyo VTC-8400 (VCORD II).<sup>134</sup>

Slightly behind the  $\frac{1}{2}$ " videocassette in popularity, but rapidly on the rise, is instant movie making. Polavision was invented by Dr. Edwin H. Land of Polaroid and introduced in 1977. Using a light-weight camera and a film processor/player, Polavision provides a rapid access form of motion pictures, in color, at less cost than videotape recording. Leonard Lessin says, "I believe we can assume that as in the past with the original Polaroid still cameras and films . . . a continual process of upgrading hardware and materials will bring with it increasing professional usefulness. Yet I am quite sure that many individuals will be able to take the product of Polavision in its present form, and come up with many new uses benefitting them in their work."<sup>135</sup>

More progress was made toward having a videodisc system on the market in 1978. Some companies went back to the drawing board; others pressed slowly forward. Ken Winslow points out that "practically every electronics manufacturer worth its salt around the world seems to be working on the videodisc."<sup>136</sup> Initial videodisc technology experiments date back to 1928. Teldec TeD, the world's first commercially available videodisc system was first sold in Europe as a consumer item about five years ago. It failed for various reasons, not the least of which is that it is a contact (needle rides in a groove) system. RCA is still doing work on its version of a contact system, which is designed purely for purposes of entertainment. The most progress is being made in the noncontact or optical systems. Philips/MCA "is the most promising of all systems announced and/or demonstrated so far,"<sup>137</sup>

says Winslow. This noncontact, laser system was to be available in December 1978 in Atlanta, Georgia, for test marketing.<sup>138</sup> Castrignano's excellent article includes a short summary of videodisc developments and a comparison of the technical characteristics of disc systems that have been successfully demonstrated and that are vying for the mass consumer market.<sup>139</sup> As for the software, discs are being produced in limited numbers, primarily for the consumer market. MCA Disco-Vision, however, "has separated consumer and non-consumer videodisc efforts and is demonstrating prospects that perhaps within a year an industrial/educational player with built-in microprocessor computer control will be sold in the U.S. independent of its introduction as a consumer product."<sup>140</sup> The real value of videodisc as related to this article is its potential for data-storage applications. In this regard the disc could become a competitor to microforms. However, it will become a competitor only when a great number of copies are made from the master.

During the past year there was considerable activity in the facsimile field. Several articles about this form of information transfer appeared, including one on the various developments and prospects for facsimile in information-transfer systems,<sup>141</sup> one on new dimensions in business facsimile,<sup>142</sup> another about "electronic" mail,<sup>143</sup> and one concerning requirements for library telefacsimile.<sup>144</sup> William Saffady's comprehensive article about facsimile transmission for libraries includes specifications of the following popular facsimile equipment: Dex 1100 Series, Dex 4000 Series, Qwip 1000 and 1200 Series, Rapifax 100, 3M VRC product group, 3M Express 9600, Xerox Telecopier 200, and Xerox Telecopier 400/410 Transceiver.<sup>145</sup>

"Electronic mail will be a key driving force in the facsimile equipment market during the early 1980's," according to a Quantum Science Corporation forecast on office technology markets and strategies. The firm believes that "the development of electronic mail will create a two-tier market for facsimile: (1) facsimile scanners will be used in conjunction with intelligent copiers for intra-company communications in large corporations; and (2) low cost facsimile units will be used at convenient locations in smaller companies and offices for intercompany transmission of text and graphics communications. . . ."<sup>146</sup> Telefiche system by PRC Image Data Systems Company, "under control of a mini-computer digitizes 24× fiche so they can be sent via facsimile to remote locations to be output in a variety of modes. . . . The PRC technology obviously ties in to satellite transmission and opens possibilities for point-to-point networks, multiple-point networks and random access networks."<sup>147</sup>

Two existing networks are noteworthy. The University of Denver Graduate School of Librarianship, with funding from HEW, "is administering a new Telefax Library Information Network (TALINET) to demonstrate methods of delivering energy resource information to remote areas. The project . . . involves tying five participating public

libraries to 14 federal libraries in a network using facsimile equipment and slow-scan television. . . . An innovative hardware combination, in which slow-scan IV (SCTV) and facsimile equipment work in tandem to provide inspection and delivery of documents, has been set up to serve the libraries. Requests for information from remote sites will be forwarded to the National Oceanic and Atmospheric Administration Library in Boulder, Colorado via telephone. Once the information is compiled, sample documents can be previewed by the user on the slow-scan TV equipment and usable documents transmitted directly using conventional fax equipment made by Qwip . . . or by Rapifax. . . .<sup>148</sup> The Public Library of Columbus and Franklin County (PLCFC), Ohio, is involved in a facsimile transmission network being set up for members of CALICO (Columbus Area Library Council) "to share the *New York Times* databank service with schools and libraries that don't subscribe to it. PLCFC bought a telecopier which will provide area patrons with access not only to the NYT databank, but also to other databanks in the library's Computerized Information System. . . . Columbus reference staff will process requests and relay data via telecopier to school and business libraries as well as other CALICO members."<sup>149</sup>

Fiber optics is beginning to play a role in image transmission. This technology, which transmits information on coherent light beams, has been called revolutionary because of its smaller size, increased capacity, and lower cost when compared to that of copper wire. Fiber optics also eliminates the need for a modem, which is required with phone line transmission. The Houston Public Library (HPL) is communicating bibliographic and ordering data to the city of Houston's Univac 1900 Computer Assisted Data Entry processor over fiber optic guides. "HPL uses the link to communicate acquisitions data from a mini-computer to the city's main computer center. . . . Another planned use is to send serials check-in data over the fiber optics channel."<sup>150</sup> "What is claimed to be a unique recorded image information system employing optic fibre transmission, recently started operation experimentally in a factory of Fujitsu Ltd. of Tokyo, one of Japan's top telecommunication equipment and electronic computer manufacturers. . . . The experimental system will be used to determine the industrial applications for such an image transmission system and practical aspects of the engineering processes so far used for installation of the system."<sup>151</sup>

Viewdata, the service that enables people to call information from a central computer by phone and have it displayed on their television screen, received considerable press during the year. The British Post Office has declared the service a success after several months of experimentation and plans to commit millions of dollars to Viewdata over the next few years. June of 1978 was the date set to begin "a market trial involving 1,500 homes and offices in London, Birming-

ham and Norwich. Public service is scheduled to begin in the first quarter of 1979."<sup>152</sup>

Another television text and graphics system that can emulate Viewdata entered the U.S. market during the year. Telegen's Antiope is one of the teletext systems that has the potential to be used for interlibrary communication or for library-patron hookups to the home. Since Antiope can send modified signals to a television receiver via phone lines, it is like the British Viewdata system.<sup>153</sup> Some specific telefacsimile equipment new to the market, in addition to those mentioned earlier, should be noted. The 3M Express 9600, designed to meet international standards for compatibility, transmits an exact copy of an average business letter over conventional telephone lines in less than thirty seconds. This unit, said to be the "world's fastest viable system for high priority mail," includes many features that have only appeared as options in facsimile equipment.<sup>154</sup> Panafax Corporation's MV-1200 is a tabletop, fully automated facsimile transceiver, which can transmit over voice-grade lines, WATS, dedicated lines, and satellite, domestically and internationally.<sup>155</sup> A machine that will transmit microfilm aperture cards or microfiche over telephone lines to a facsimile receiver is available from Telemechanics, Inc.<sup>156</sup> The new Matsushita UF-2200 facsimile machine has a number of auxiliary functions made possible by its incorporation of a Fairchild 8-bit F8 microprocessor.<sup>157</sup>

Allen B. Veaner sums up this section nicely: "Human beings require a spectrum of media to serve their graphic and non-graphic information needs. The one medium that serves every purpose doesn't exist and probably never will. So I say: Hurray for micrographics, ink print, video, audio, the whole lot—when properly meshed with the user's need."<sup>158</sup>

#### *Publications, Research, and Professional Activities*

"Prolific" and "impressive" must be the terms to describe the literature published during 1978 dealing with copying, micrographics, and graphic communications. It seems that an increasing number of articles about this field appeared in publications that haven't heretofore covered the topic. More new publications dealing with various aspects of the field seem to have appeared than last year. Volumes or issues of irregular series seem to have been timed to emerge in 1978. Space allows for the mention of some of the more significant periodicals, articles, monographs, and nonprint media productions.

In addition to the two valuable standard periodicals *Microform Review* and the *Journal of Micrographics*, the following made welcome contributions: Jarmy and Spreitzer prepared a "source of basic information for answering questions about library materials in microform."<sup>159</sup> Technical Information, Inc., published its first annual *Graphic Communications Marketplace*. The new 264-page book provides "detailed information on 2200 contemporary manufacturers and

suppliers of graphic arts equipment, electronic and computer-based systems, and a wide range of services for printers and publishers."<sup>160</sup> "The biggest and best yet" is one description of the 1978-79 *International Microfilm Source Book*.<sup>161</sup> The new 7th edition of the *Directory of Library Reprographic Services/A World Guide*, sponsored by Reproduction of Library Materials Section, RTSD ALA, became available in 1978.<sup>162</sup> *The Micropublishers' Trade List Annual, 1978*<sup>163</sup> and *Microform Market Place, 1978-1979: An International Directory of Micropublishing*<sup>164</sup> both came on the market during the year. NMA's 1978 *Buyers Guide*<sup>165</sup> appeared also. The *IMC Journal*<sup>166</sup> went to a new format during the year and reverted to vol.1, no.1. The journal will be quarterly, "more attractive" and "meatier." Librarians should be interested in *Cumulative Microform Reviews* that carries a collection of reviews that appeared in *Microform Review* between 1972-76. On the foreign scene, two new serial publications came into being: *Micrographics Australasia*,<sup>167</sup> describing applications, products, and new developments in that part of the world, and the newsletter from Brazil, *Noticiario Micrografico*.<sup>168</sup>

Other items of interest include articles by Smith on the use of technology in libraries;<sup>169</sup> by Yerburgh on evaluating microform collections;<sup>170</sup> by Allardye on acquiring, copying, and lending microforms;<sup>171</sup> by Pomranka who proposes a microfiche interlibrary lending system for large research libraries;<sup>172</sup> by Avedon on selecting a service bureau;<sup>173</sup> by Nichols on foreign and international documents in microform;<sup>174</sup> by Kerschner on state and local documents microfilming programs;<sup>175</sup> by Chambers on federal documents in microform;<sup>176</sup> and by Ball about attitudes, bibliographic control, space and cost considerations, and collection development of government documents.<sup>177</sup>

Monographs appearing during the year include Gabriel's comprehensive treatment of the history and application of microform utilization in libraries;<sup>178</sup> Bahr's work on innovative uses in education and in housing library collections;<sup>179</sup> Cabeceiras' basic introduction on the selection and use of nonprint media and equipment;<sup>180</sup> a study dedicated to the questions involved in managing serials collections with microforms;<sup>181</sup> a reader on microforms management in special libraries;<sup>182</sup> a volume providing a basic understanding of how microforms are being used vis-à-vis library catalogs;<sup>183</sup> a guide describing the contents and associated indexes or bibliographies of 200 microform collections from publishers worldwide;<sup>184</sup> Saffady's textbook on microform reproductions<sup>185</sup> and his work on computer-output microfilm.<sup>186</sup>

Nonprint productions about the field received some attention. University Microfilms International produced an educational package that introduces students to microfilm, microfiche, and microform readers and printers, as well as to the wealth of information, which they can provide. A ten-minute 16mm cartridge sound filmstrip accompanied by a printed guide, "was designed to relieve the librarian of much of

the time-consuming responsibility for introducing students to the world of microform."<sup>187</sup> The cartridge filmstrip is designed to be used in either the LaBelle Sentinel 16 or LaBelle Courier 16 Sound-Filmstrip Viewer. The program is also attainable in 35mm slides. The NMA Board of Directors approved the development of a training package intended to improve the knowledge level of technicians and others about micrographic methods, techniques, formats, and terms. The package consists of four booklets with text and illustrations, as well as a review booklet and an audiovisual presentation using color microfiche.<sup>188</sup>

Research continues in micrographics. Supported by a grant, AMIGOS Bibliographic Council studies staff and patron views on microfilm. Users preferred film to fiche (68 percent to 14 percent) when using a COM union list.<sup>189</sup> A study of fungal damage of microfilm has shown that a "new method of simple, inexpensive film protection, ethylene oxide, dry cold sterilization has been included in the test and has given promising indication of merit. Vesicular film, diazo film, polyester and acetate bases and silver gelatin emulsion Amprolene sterilized have proven to be totally fungus resistant after one year in a super-saturated fungal growth environment."<sup>190</sup> Ninety-six U.S. libraries with the largest microform collections were surveyed to determine their current practices relating to cleaning microfilm. Most libraries do not clean their collections in any systematic fashion.<sup>191</sup> A statewide survey of collection-development librarians from California was conducted to determine attitudes toward and the extent of knowledge about microforms.<sup>192</sup> A survey designed to determine the availability of microform equipment in 796 depository libraries was taken.<sup>193</sup>

Grant money was appropriated to twenty research libraries to help make library collections more readily accessible. Of \$5 million (from Title II-C of the Higher Education Act) more than \$1 million went to libraries involved in preservation projects such as preserving photographic materials and microrecordings.<sup>194</sup>

Again this year, there was a great deal of activity related to standards. The American National Standards Institute (ANSI) announced the formation of a National Standards Policy Advisory Committee (NSPAC) "to assess both the merits and deficiencies of the present voluntary and Governmental standards systems."<sup>195</sup> Avedon gave a presentation on worldwide approved and published micrographic standards.<sup>196</sup> Archard presented a paper on the way standards are developed, and how national and international standards relate to one another.<sup>197</sup> The West German Micrographics Association is spearheading a move for standardization of fiche formats, sizes, and reduction ratios.<sup>198</sup> The National Bureau of Standards issued Federal Information Processing Standards (FIPS) 54, which establishes formats and reduction ratios for computer-generated 16mm and 105mm microforms.<sup>199</sup> NMA issued a new standard test chart for Rotary Microfilm Cameras, MS17—1977.<sup>200</sup> Standards approved dur-

ing the year include ANSI/NA MS14—1978 (formerly Ph 5.3) "Specifications for 16mm and 35mm Silver Gelatin Microfilms for Reel Applications; ANSI/NMA MS111—1978 (formerly Ph 5.25) "Recommended Practice for Microfilming Newspapers;" and ISO 3334 "Microcopying ISO Test Chart No. 2—Description and use in Photographic Documentary Reproduction."<sup>201</sup> The National Commission on Libraries and Information Science (NCLIS) granted \$10,000 in transition funding for the American National Standards Committee Z39 to implement changes in the structure of Z39 that were recommended by a NCLIS task force some time ago.<sup>202</sup> The "Proposed National Standard for Information on Microfiche Headers" reached final stages of balloting in 1978 with the overwhelming majority of individuals and organizations voting yes. A few changes to accommodate a few reservations of individuals are now being made. The final report of ALA, RTSD, RS, Micropublishing Committee's Ad Hoc Subcommittee on Monitoring of Microform Advertising was submitted to the parent committee at the 1979 ALA Midwinter Meeting. The ad hoc committee's work being completed, it was dissolved with a promise that a report of committee activities would be written by Margaret Byrnes and submitted for publication.

To get a feeling for the amount of activity related to the field of micrographics, copying, and graphic communications, one needs only to look at a sampling of meetings, workshops, and conferences held during the year. In January, the National Capital Chapter of NMA sponsored a professional training seminar to provide education and training in film technology as it relates to microfilm applications. In February, the Computer Micrographics Technology (COMtec) Convention was held for the purpose of providing education at the beginning level for those involved in preparing for COM operations. In March, the Rocky Mountain chapters of ARMA and NMA conducted a four-day seminar on source-document microfilming, and COM Xidex held five seminars. Xidex also conducted four seminars in April with the cooperation of local NMA chapters. In June, the GPO Microforms Task Force sponsored a program on the use and care of microforms and at the ALA Convention, RLMS, RASD Interlibrary Loan Committee, and the ALA Legislation Committee cosponsored a program on photocopying, fair use and management of collections. In July, the University of Wisconsin - Stout hosted a conference on micrographic fundamentals; the Institute for Graphic Communications, Inc., presented a seminar on advances in optical information storage and one on the future of videodisc systems. In September, the Graphic Arts Research Center (GARC) of Rochester Institute of Technology gave a seminar on preservation and restoration of photographic images. The Fourth Annual Library Microform Conference was held in October. Microforms for libraries was the topic stressed at an institute held in December by the University of Denver School of Librarianship. On the foreign scene, the Microfilm Association of

Great Britain was very active, holding several meetings; the annual French micrographic show was held in May and the Canadian Micrographic Society held its Micro-Forum '78 in October.

Bibliographic control of microforms has always been an area of high interest as well as a source of frustration on the part of many. This frustration is a result of the seemingly slow progress made in the past. Illustrative of this frustration are the comments of William J. Myrick: "The need for bibliographic control of microforms is generally recognized . . . efforts so far towards achieving this end have been uncoordinated, poorly supported, and generally unsuccessful. . . ."<sup>203</sup> A valiant effort to help the situation comes in Suzanne Dodson's report on her activities in preparing a guide to 200 microform collections.<sup>204</sup> One very significant event that will move us closer to bibliographic control of microforms was the meeting held in April in Washington, D.C., conducted by Robert Grey Cole, chairperson of the ALA, RTSD, RS, Micropublishing Committee's Ad Hoc Subcommittee on the Bibliographic Control of Microforms. This meeting, sponsored by RTSD and funded by ALA, addressed itself specifically to the question of including microforms in the national bibliographic network. The attendees included eighteen people representing such organizations as ALA, LC, ARL, CLR, ANSI, NCLIS, NEH, along with persons representing micropublishers. The elements of the strategy for including microforms in the national bibliographic network decided upon at the meeting include: (1) to broaden the MARC format to include the access points necessary for microforms; (2) to include those revisions necessary for microforms in the manuals of bibliographic conventions for automated library networks; (3) to identify a means for micropublishers to input their cataloging into the national bibliographic network without financial loss; (4) to include microforms in the programs to teach librarians about the changes necessary for implementation of AACR 2; (5) to develop a standard, if needed, for commercial bibliographic listings of microforms; and (6) to establish an office located in Washington, D.C., to plan, organize, and coordinate the implementation of the strategy.<sup>205</sup>

The need for educating the user of micrographics systems is emphasized by William L. Brayer: "Educating the user will not only dispel . . . misconceptions and improve effectiveness of his own application, but will provide greater exposure for the industry. Microfilm should always be user oriented; establishing micrographic curriculums in college environments that the user may pursue for credit or simply for knowledge will help meet that goal."<sup>206</sup> Some examples of efforts to fill this need include Green River Community College, Washington, which offers twelve courses in micrographics (more than 200 students registered for one or more of these classes); ten-week Saturday morning sessions on "Microfilm Processes and Technology" and "Practical Microfilm Systems" offered at Pace University in New York City; ten-week extension courses about micrographic systems taught at

California State University at Los Angeles; and Hatfield Polytechnic's three-day course on micrographics "designed to provide a broad knowledge base for microform systems, media, techniques and hardware."<sup>207</sup> NMA created a fifth internal department during the year. The new education department "has responsibility for seminars, annual conference and midyear meeting programming, operating the NMA resource center and speakers bureau and special training packages."<sup>208</sup>

### *Conclusion*

In summary, 1978 was a very active year in the fields of copying, micrographics, and graphic communications. There will be several areas of interest to watch in 1979. Considerable discussion will likely ensue about copyright and libraries as we move into the second year of the five-year prereview time. Watch the Copyright Clearance Center to see if and how it survives. It will be interesting to see the progress made in establishing a National Periodicals Center. The controversy that exists over the G.P.O. micropublishing program and commercial micropublishers will probably grow. The emphasis on low cost and portability of microform readers will continue. The number of libraries planning to convert to some form of microform or on-line catalog will increase. The use of  $\frac{1}{2}$ " videotape in libraries will rise sharply just as it will in the home. Videodiscs will make slight inroads into the home and educational market. Viewdata and similar systems will be the source of most of the action in the electronic transmission of information field.

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# An Introduction to AACR 2

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*A summary of the major provisions of the second edition of Anglo-American Cataloguing Rules, including changes from the first edition, and specification of the options adopted by the Library of Congress and other national cataloging agencies is presented. Areas of possible ambiguity and necessary decisions before the implementation of the new code on 1 January 1981 are identified.*

DURING THE YEAR FOLLOWING COMPLETION of the text of the second edition of the *Anglo-American Cataloguing Rules* (AACR 2),<sup>1</sup> a number of major documents related to the new code have appeared, including (1) a general introduction to the code by Michael Gorman, joint editor, (2) a detailed "cross index of the two editions of the *Anglo-American Cataloguing Rules*, incorporating a commentary on the second edition and on changes from previous cataloguing standards" by Ronald Hagler, a member of the Joint Steering Committee for Revision of AACR (the body ultimately responsible for the substance of the code) and chairman of the Canadian Committee on Cataloguing/Comité canadien de cataloguage at the time of publication of the second edition, and (3) a number of summaries and official statements relating to sections of the code prepared by the Library of Congress.<sup>2</sup> In addition to these generally available documents, the published proceedings of the International Conference on AACR 2 held 11–14 March 1979 at Tallahassee, Florida, will constitute another major source of information.<sup>3</sup>

Taken together, these documents provide a wealth of detail regarding major and minor provisions of AACR 2, changes from AACR 1, speculations concerning the meaning of various rules and sections of the code and statements relating to application of particular provisions of the code by the major national cataloguing agencies of the Anglo-American community. The present account is a synthesis and summary of these documents and statements, presented in the hope that it will contribute to efforts of librarians seeking to focus on the major

questions requiring discussion and decisions before adoption of AACR 2 by the Library of Congress and other national cataloging agencies on "Day 1," 2 January 1981.<sup>4</sup> It follows the order of subjects treated in the code, beginning with general considerations, followed by a discussion of each of the parts of the code, and ending with a brief discussion of policies and problems of implementation.

(This account makes no attempt to address the additional problems resulting from the abandonment by the Library of Congress of the practice of "superimposition" and the relation of AACR 2 headings to pre-AACR 1 headings. These are involved questions and the changes resulting in library catalogs from the abandonment of superimposition may well prove to be greater than those resulting from the adoption of AACR 2. However profitable an enterprise it may have proved to include consideration of these problems, they have been ignored in order to limit the discussion to manageable dimensions. The Library of Congress has provided a hint of the dimensions of the total problem:

When considering the effect of AACR 2 on the form that headings for persons, corporate bodies, and uniform titles will take, it is necessary also to be aware that the Library of Congress will abandon, not only many of the headings created under AACR 1, but also many headings based on pre-AACR 1 rules. Thus when new bibliographic records begin to appear following Day 1 (January 1981), many older headings will be presented in a new form, and some of these new forms will result from differences between AACR 2 and pre-AACR 1 rules, rather than differences between AACR 1 and AACR 2.<sup>5</sup>)

### *General Considerations*

The first change to be noted in AACR 2 relates to its organization, which reverses the order of treatment in the first edition of the two main activities in descriptive cataloging: determination of entries or access points and description of the physical object. The rationale for this reversal has been presented by Gorman:

The order of the major parts of previous cataloguing rules (AA 1908 as well as AACR 1) showed that the cataloguing process was viewed in terms of the premachine cataloguing entry—that is, that the first task of the cataloguer was to establish the main entry heading and its consequent added entries and then make the description. That description was modified in light of the decisions made on headings (see, for example, the rules in both codes on statements of authorship and imprint). This produced an entry that was adapted to card or book catalogues based on the main entry principle but was largely unsuited to any newer forms, and completely unsuited to developed machine-readable records with their multiplicity of uses. The overall structure of AACR 2 is designed to recognize the multiple-use bibliographic record. The first task of the cataloguer is conceived of as establishing a standard and self-sufficient set of descriptive data relating to the physical object being catalogued (book, motion picture, sound recording, etc.). The second task is conceived of as providing name and title access points (headings and uniform titles) to permit retrieval of the standard description.<sup>6</sup>

Another important feature of AACR 2 is the extensive provision of options, which are more clearly identified than the alternatives presented in AACR 1. In the words of the code,

Alternatives and options . . . arise from the recognition that different solutions to a problem and differing levels of detail and specificity are appropriate in different contexts. Some alternatives and options should be decided as a matter of cataloguing policy for a particular catalogue or bibliographic agency and should therefore be exercised either always or never. Other alternatives and options should be exercised case by case. It is recommended that all cataloguing agencies distinguish between these two types of options and keep a record of their policy decisions and of the circumstances in which a particular option may be applied. (0.7)

It is clear that the decisions of national cataloguing agencies relating to options will be of great practical importance.

Attention must also be paid to the function of the examples:

The examples used throughout these rules are illustrative and not prescriptive. That is, they are intended to illuminate the provisions of the rule to which they are attached, rather than to extend those provisions. Neither the examples nor the form in which they are presented should be taken as instructions unless the accompanying text specifically states that they should. (0.14)

Inevitably, however, they will be used in attempts to understand the intent of the framers of the rules, particularly in Part II. Thus, "Two examples in rule 24.17 make it particularly evident that the intent of AACR 2 is to *restrict* as much as possible the entry of agencies under the name of a government."<sup>7</sup> The examples may also serve to highlight a change from present practice not explicitly stated in the rules, the most notable instance being the use of "United Kingdom" in the examples in chapter 24, as compared to "Great Britain" in AACR 1.

Users of the new code must also be aware of a major organizational change reflected at several points, particularly in Part II. It has been identified by Hagler as an attempt "to bring together rules dealing with particular elements of headings, rather than . . . rules dealing with particular types of bodies. The most striking instance of this relates to the rules for conferences," which in AACR 1 were brought together at one point and which must be sought in five different rules in AACR 2.<sup>8</sup> Because of this rigorous analysis of the elements of a heading and the parts of a description, it is clear that the cataloguer seeking to apply AACR 2 must have a greater familiarity with the totality of the code than was the case with AACR 1.

#### *Description (Part I)*

Part I, Description, consists of thirteen chapters: chapter 1, General Rules for Description; chapters 2 through 10, each dealing with a specific type of material, e.g., chapter 2, Books, Pamphlets and Printed Sheets, chapter 3, Cartographic Materials, etc., and chapters 11

through 13, consisting of “rules of partial generality” for microforms, serials and analysis. All of the rules in this part are based on the general framework for the description of library materials known as the *ISBD(G): General International Standard Bibliographic Description*<sup>9</sup> and each chapter except 13 is subdivided into the following areas: (1) title and statement of responsibility; (2) edition; (3) material (or type of publication) specific details (specified only for cartographic materials and serials); (4) publication, description, etc.; (5) physical description; (6) series; (7) notes; and (8) standard number and terms of availability. In the words of Gorman,

The result of the use of ISBD(G) in AACR 2 is that all the rules on description conform to a single set of punctuation conventions, that all descriptions resulting from the rules in part I contain data given in the same order, and that a single catalogue based on the part I rules will have an internal harmony brought about by the application of the same principles to descriptions of different kinds of library materials.<sup>10</sup>

In using Part I, the cataloger must remember that chapter 1 is intended to contain “those rules that apply to all library materials” (0.23) and presents brief, general guidance, which may be supplemented in a later chapter for a specific type of material. However, the user is frequently referred to chapter 1 from subsequent chapters, and its provisions must be kept in mind in handling any specific type of material. (The single major variation from this pattern is found in the material on notes, for which general directions and rationale are given in chapter 2 rather than chapter 1.) Further, the rules in chapters 11–13 “modify the provisions of the preceding chapters in some instances and are used in conjunction with those rules in other instances.”<sup>11</sup> Thus,

it is a cardinal principle of the use of Part I that the description of a physical item should be based in the first instance on the chapter dealing with the class of materials to which that item belongs. For example, a printed monograph in microform should be described as a microform (using the rules in chapter 11). There will be need in many instances to consult the chapter dealing with the original form of the item, especially when constructing notes. So, using the same example, the chapter dealing with printed books (chapter 2) will be used to supplement chapter 11. In short, the starting point for description is the physical form of the item in hand, not the original or any previous form in which the work has been published. (0.24)

The relationship of the several chapters in Part I is further clarified by the use of a mnemonic numbering structure, resulting, for example, in the rule for place of publication for all materials being numbered 1.4C, the rule for place of publication for printed monographs being numbered 2.4C, and the rule for place of publication for cartographic materials being numbered 3.4C. (0.23)

A number of points related to physical description warrant special attention.

*"Sources of Information."* As noted in rule 1.0A, each chapter contains a specification of the chief source of information for each material or type of publication. In some instances other sources of information may be specified and placed in ranking order. Information taken from outside the prescribed source(s) is to be enclosed in square brackets. (The chief source of information is also important in the determination of access points, as noted later in this paper.)

*"Prominence."* The word "prominently," (as in "prominently named" and "stated prominently") is used in a precise way to refer to formal statements found in one of the prescribed sources of information for area 1 (title and statement of responsibility) and area 2 (edition) (0.8). (The concept of prominence is also invoked in the determination of access points, as noted later.)

*"Levels of Description."* Rule 1.0D establishes three levels of description, designed to "allow libraries flexibility in their cataloguing policy. . . . They prescribe an entry that is in conformity with bibliographic standards and yet allow some materials to be described in more detail than others." (0.29)

*General Material Designation (GMD).* The use of a term identifying the broad class of material to which an item belongs, previously specified only for filmstrips, motion pictures, sound recordings, and certain instructional materials (all on a mandatory basis) has been extended to all materials on an optional basis. That is, it is to be used at the discretion of the cataloguing agency. Rule 1.1C1 presents two lists of "GMD's, one for British and one for North American users (representing the only instance in which agreement on a single text could not be reached). In all later chapters of Part I, with the exception of 2 and 12, "[GMD]" is used in examples, rather than the particular term, such as "map," "object," etc. The Library of Congress, the British Library, the National Library of Australia, and the National Library of Canada have agreed that "bibliographic records created by each in machine-readable form would include the information necessary to derive the appropriate GMD,"<sup>12</sup> with each institution free to establish its own policy for displaying the GMD. The Library of Congress has sought response to its recommendation that it continue the status quo (GMD used for materials catalogued under AACR 1 chapters 12, "Audiovisual Media and Special Instructional Material" and 14, "Sound Recordings") and begin to use the GMD "microform."<sup>13</sup>

*"Statement of Responsibility."* The term "statement of responsibility" has replaced the term "statement of authorship" found in AACR 1 and its revisions. According to Gorman, "The new term implies less than the old term and also fits in better with the reality of such statements found on many nonprint items."<sup>14</sup> The concept has been extended to the series note, resulting in "a single practice in relation to statements of responsibility" for cataloguers working with both series and monographs,<sup>15</sup> and to notes.

*Description of Serials.* Major changes in the descriptions of serials in-

clude (1) the application of ISBD principles to descriptive cataloging and (2) the use of the title page of the first issue (or substitute therefor) as the chief source of information, rather than the latest issue.

*Early Printed Books.* A separate section of rules (2.12–2.18) presents “extra rules for the description of books, pamphlets and broadsides published before 1821 in countries following European conventions in bookmaking.”

### *Choice of Access Points (Chapter 21)*

The chapter on choice of access points is organized as follows:

1. Introductory rules (21.0)
2. General rules relating to works of personal authorship, entry under corporate body and entry under title (21.1–21.7)
3. Rules relating to works of mixed responsibility  
Divided, following a rule on scope (21.8), into
  - a) Modifications of texts, including adaptations of texts, illustrated texts, revisions of texts, texts published with commentary, translations, and texts published with biographical/critical material (21.9–21.15)
  - b) Modifications of other works, including art works, musical works, and sound recordings (21.16–21.23)
  - c) New works (21.24–21.27)
4. Rule for related works (21.28)
5. Rules for added entries (21.29–30)
6. Rules for “certain legal publications” and “certain religious publications” (21.31–21.39)

*Authorship and Main Entry.* Major changes have occurred in the definition and use of the terms “author” and “authorship.” AACR 1 defined “author” as “the person or corporate body chiefly responsible for the creation of the intellectual or artistic content of a work.”<sup>16</sup> Gorman has asserted that “one of the major flaws of . . . AACR 1 lies in its unorganized treatment of ‘corporate authorship’”, a concept that remains “elusive,” leading the Joint Steering Committee to find “the idea that . . . a corporate body can be an author in the same way as a person . . . apparently unreasonable” and one that “has led to much inconsistency in application.”<sup>17</sup> He further asserts that “the nebulous notion of corporate authorship has been replaced by a rigorous operational definition of corporate responsibility.”<sup>18</sup> Hagler finds that the terms “corporate author” and “corporate authorship” have been “replaced as necessary . . . by any of several circumlocutions which avoid any implication of authorship.”<sup>19</sup> It is uncertain to what extent we may define a concept of “corporate responsibility” to replace “corporate authorship,” but in any case the term “author” is now to be applied only to persons and rule 21.1A1 specifies as examples of personal authors writers of books, composers of music, compilers of bibliographies, cartographers, artists, and photographers. The only major change in the concept of personal authorship is its expansion to

include, in specified cases, performers who contribute to sound recordings, films, and videorecordings (21.23C). Rule 21.1A2 specifies the situations in which main entry is to be made under personal author. Lacking a direct discussion of relative priority between personal authorship and corporate responsibility, the cataloger will find guidance in the examples in 21.4A/B, particularly "A short title catalogue of French books" and "Fifty years of modern art" under 21.4A and "A room-to-room guide to the National Gallery" under 21.4B.

In place of the concept of corporate authorship, then, AACR 2 specifies that "a work emanating from one or more corporate bodies" is to be entered "under the heading for the appropriate corporate body" if it is (1) "of an administrative nature dealing with the corporate body," (2) one of a specified group of "legal and governmental works," (3) one that records the "collective thought of the body," (4) one that reports the "collective activity of a conference . . . of an expedition . . . or of an event . . . falling within the definition of a corporate body . . . provided that the conference, expedition, or event is prominently named in the item," or (5) a sound recording, film, or videorecording "resulting from the collective activity of a performing group as a whole where the responsibility of the group goes beyond that of mere performance, execution, etc." (21.1B2).

Title main entry is prescribed for a work (21.1C) when

- 1) the personal authorship is unknown . . . diffuse . . . or cannot be determined, and the work does not emanate from a corporate body

or

- 2) it is a collection or a work produced under editorial direction . . .

or

- 3) it emanates from a corporate body but does not fall into one or more of the categories given in 21.1B2 and is not of personal authorship

or

- 4) it is accepted as sacred scripture by a religious group

It is likely that the specification of cases calling for corporate main entry will lead to more main entries under title but not, probably, many fewer total entries under corporate bodies, because many items that would previously have been entered under corporate entry will now be entered under title with an added entry under the corporate body.

The general concept of main entry has been retained, with conscious recognition of the assertion of some that it is no longer a valid concept:

In Part II the rules are based on the proposition that one *main entry* is made for each item described, and that this is supplemented by *added entries*. The question of the use of *alternative heading* entries (i.e. sets of equal entries for each item described) was discussed but has not been embodied in the rules, largely because of the lack of time to explore the considerable implications of

such a change. It is recognized, however, that many libraries do not distinguish between the main entry and other entries. It is recommended that such libraries use chapter 21 as guidance in determining all the entries required in particular instances. (0.51)

In addition to these general considerations relating to authorship and main entry, a number of other items may be noted.

*"Access Points."* The term "access point" has been introduced as a general term to include any "name, term, code, etc., under which a bibliographic record may be searched and identified." (Glossary) Access points are determined primarily from the chief source of information for the item (or its substitute) with account being taken of other "prominent" statements (21.OB).

*Provision of Additional Access Points.* The rules for added entries have been modified to permit more frequent added entries, for example (1) for corporate bodies, which act as publisher (if the responsibility extends beyond that of publication); (2) for translators; (3) for prominently named editors and compilers of monographic works; and (4) for titles (extending even to common titles such as "Memoirs" and "Letters").<sup>20</sup> Further, as noted with examples by Hagler, "there is a frequent change . . . to the requirement of added entries in situations where AACR 1 called for references."<sup>21</sup> One example noted by Hagler is that of a person other than the author to whom a work has been attributed (21.5B).

*Designation of Function.* Rule 21.0D permits, as an option, the addition of an abbreviated designation of function to added entry headings for persons serving as compiler, editor, illustrator, or translator. The Library of Congress has not reached a final decision on this option, preferring to await the results of work presently in progress, which it is hoped will result in international agreement. For now, it has noted the "expense of making such intellectual judgments" as a principal factor in its decision not to apply this and related options concerned with arrangements, academic disputations, and certain legal works.<sup>22</sup>

*Related Works.* All related works are now to be treated as independent works, regardless of the nature of their title (21.28). (The Library of Congress has pointed out that this will not cause a change in present LC practice, because of the abandonment of the "dash-entry" technique some time ago.<sup>23</sup>

Among the specific changes from AACR 1 practice, one may note:

1. use as the main entry heading of "a characterizing word or phrase" (such as "a physician," "the author of . . .") representing a personal author whose identity is unknown (21.5C). Such works were previously entered under title.
2. the absence of a special rule for serial publications, which are now to be considered like all other publications in determining main entry.<sup>24</sup>

3. the elimination of form subheadings for legal and liturgical works, such as "Laws, statutes, etc." under names of jurisdictions, e.g., "United States. Laws, statutes, etc." and "Liturgy and Ritual," particularly under names of churches, e.g., "Catholic Church. Liturgy and Ritual." Further details on the handling of these items will be found in the section on uniform titles of this paper.
4. for treaties between two or three countries, entry, in most instances, under the government whose name comes first in English alphabetic order rather than the home country. (21.35A1)<sup>25</sup>

#### *Headings for Persons (Chapter 22)*

The rules for form of personal name are organized as follows:

1. rules for choice of name (22.1–22.3)
2. rules for entry element (22.4–22.11)
3. rules for additions to names (22.12–22.19)
4. a rule for undifferentiated names (22.20)
5. "special rules for names in certain languages" (Arabic, Burmese, Chinese, Indic, Indonesian, Malay, and Thai) (22.21–22.28)

As an illustration of the basic organization of AACR 2 around topics rather than complete headings, the cataloger must consult rules in the first three sections defined above in formulating a given heading. Thus, section 1 would direct the choice of "Jimmy Carter" rather than "James Earl Carter" for the present president of the United States, section 2 would call for inversion of the name to "Carter, Jimmy" and section 3 would mandate the addition of "1924—" to the heading for the president if necessary to distinguish him from another person of the same name. Further discussion of the contents of the chapter has been provided by the Library of Congress.<sup>26</sup>

*Form of Personal Name.* The general rule for determining the heading for a person is "Choose . . . the name by which he or she is commonly known. This may be the person's real name, pseudonym, title of nobility, nickname, initials, or other appellation" (22.1A). We are further directed to "determine the name by which a person is commonly known from the chief sources of information . . . of works by that person issued in his or her language" and, for persons who work in a nonverbal context (e.g., painters, sculptors) or who are not known primarily as authors, to "determine the name by which he or she is commonly known from reference sources issued in his or her language or country of residence or activity" (22.1B). If there is no one name by which the person is clearly most commonly known, we are directed to "choose one name or form of name according to the following order of preference: (1) the name that appears most frequently in the person's works, (2) the name that appears most frequently in reference sources, and (3) the latest name, "unless there is reason to believe that an earlier name will persist as the name by which the person is better known" (22.2). We are told to prefer the

“predominant” form of a person’s name (22.2C2) and, in the case of a person using pseudonyms and not known predominantly by one name, to “choose as the heading for each item the name appearing in it,” resulting in the listing of works by the single author John Creasey under his real name and as many pseudonyms (e.g., Gordon Ashe, Michael Halliday) as are represented in a given collection (22.2C3). If the forms of a name vary in fullness, we are directed to choose the form most commonly used (22.3A).

*Some Special Points.*

1. Nonroman names.

Persons entered under given name are to be entered under the form of name that has become well established in English-language reference sources or, if no English romanization is found or no one romanization predominates, under the romanization resulting from application of the “table for the language adopted by the cataloguing agency” (22.3C1). For persons entered under surnames, alternative rules are given providing for use of a table or for use of the form “that has become well established in English-language reference sources” (22.3C2). The Library of Congress has chosen the latter option,<sup>27</sup> resulting in the use of “Yevgeny Yevtushenko” for the contemporary author, with other authors of the same name to be entered under “Evgenii Evtushenko.”

2. Qualifiers in given names.

All qualifiers except patronymics and place names in Icelandic are now separated from the entry element by a comma (22.8A), resulting in “John, the Baptist” and “Alexander, of Aphrodisias” rather than “John the Baptist” and “Alexander of Aphrodisias,” as in AACR 1.

3. Entry under phrases.

Minor changes have been made in the rules for entry of names consisting of phrases, including the addition of “a suitable general designation” to a name that “does not convey the idea of a person,” resulting in the headings “River (Writer)” and “Taj Mahal (Musician).” (22.11)

4. Titles of nobility, etc.

Titles of nobility are to be added to headings for persons entered under surname only if the title appears in the works, resulting in “Buchan, John” rather than “Buchan, John, Baron Tweedsmuir.”

5. Entry for authors using initials rather than full names.

Rule 22.16A specifies that “if part or all of a name is represented by initials and the full form is known, add the spelled out form in parentheses if necessary to distinguish between names that are otherwise identical.” Thus,

AACR 2: Smith, Russell E. (Russell Edgar)  
Smith, Russell E. (Russell Eugene)

AACR 1: Smith, Russell Edgar  
Smith, Russell Eugene

An important option to this rule permits making the additions to other names containing initials as well (that is, without regard to the need to distinguish one person from another). The Library of Congress has announced that it will apply this option (and the option of adding dates to author headings) "in cases where the necessary information is readily available."<sup>28</sup>

*Geographic Names (Chapter 23)*

As noted by Hagler,

The principal change in the treatment of geographic names is one of theory. In AACR 2 they are given a chapter to themselves, and are not treated solely within the environment of the naming of corporate bodies. This change has practical side-effects in encouraging the recognition of a distinction between the naming of places as geographic features (Ch. 23), and the naming of government jurisdictions which happen to be known by geographic names (24.3E, 24.6).<sup>29</sup>

The chapter begins with a general rule relating to choice of English or vernacular form of name, favoring the former "if there is one in general use." The publications of the Board of Geographic Names are no longer cited as primary authorities, but the Library of Congress is mandated by Public Law 80-242 to use the decisions of the board and notes that the board's current policy is "to favor the vernacular form of name with only a few exceptions for conventional English forms."<sup>30</sup> For rules on change of name, the user is referred to chapter 24. The major part of the chapter, the rules for additions to geographic names, follows. The general rule calls for addition of a larger place name to a given place name when necessary to distinguish place names of the same name and, in addition, provides the option of adding a qualifier to all place names whether it is needed to distinguish the names or not. The Library of Congress has announced that it will add the larger entity to city names, but not to state names.<sup>31</sup> The general rule also calls for the use of parentheses to enclose all qualifiers. As a result, LC will use, for example, "Chicago (Ill.)" and "Paris (France)" rather than the present unqualified forms "Chicago" and "Paris."

Among a number of other relatively minor changes from AACR 1 practice, AACR 2 abandons the use of certain abbreviations, including "Eng.," "Ire.," "Scot.," "Ger.," and provides new procedures for qualifying place names in England, Wales, Scotland, Northern Ireland, and the Republic of Ireland.<sup>32</sup>

*Headings for Corporate Bodies (Chapter 24)*

The rules for form of corporate name are organized as follows:

1. Basic rule (24.1)
2. Variant names (24.2-24.3)
3. Additions, omissions, and modifications, including rules for gov-

- ernments, conferences, exhibitions (24.4—24.11)
- 4. Subordinate and related bodies (24.12—24.16)
  - 5. Government bodies and officials (24.17—24.26)
  - 6. Religious bodies and officials (24.27)

*Major Provisions and Changes.* A greater emphasis on the form of name by which a corporate body is predominantly identified, with fewer provisions for modifications and omissions, leads to changes of the following kinds:

AACR 2: 3 October-Vereeniging  
AACR 1: Drie October-Vereeniging

AACR 2: M. Robert Gomberg Memorial Committee  
AACR 1: Gomberg (M. Robert) Memorial Committee

AACR 2: Real Academia de Bellas Artes de San Jorge  
AACR 1: Academia de Bellas Artes de San Jorge

AACR 2: AFL-CIO  
AACR 1: American Federation of Labor and Congress of Industrial Organizations

Other changes include (1) specification of the use of parentheses for the addition of qualifiers (24.4A):

AACR 2: Loyola University (Chicago)<sup>33</sup>  
AACR 1: Loyola University, Chicago

(Qualifiers are required in the case of two or more bodies with the same name and, optionally, may be used for all names whether necessary to distinguish or not. The Library of Congress will apply this option on a “limited, case-by-case” basis.<sup>34</sup>); (2) a different format for the component parts of the name of a conference (24.7):

AACR 2: Louisiana Cancer Conference (2nd : 1958 : New Orleans)

AACR 1: Louisiana Cancer Conference, 2d, New Orleans, 1958, and (3) the provision to omit initial articles unless required “for grammatical reasons” (previously “for reasons of clarity or grammar”) (24.5A):

AACR 2: Club (London)  
AACR 1: The Club, London

As Hagler has pointed out, AACR 2 continues the movement toward consistent use of direct entry of a corporate name (rather than under place name or name of a higher corporate body) and has attempted to bring into closer agreement the rules for governmental and nongovernmental corporate bodies.<sup>35</sup> For nongovernmental bodies, five types of name are presented that are to be entered under the higher body (24.13). These names either indicate subordination, imply subordination, or suggest use by another higher body. For government agencies, ten types of unit are identified that are to be entered under the jurisdiction rather than the name of the unit (24.18).

Three of these are based on the nature of the name, and the others are based on the function of the unit.

Other provisions of the chapter include (1) alternative rules for corporate names in languages written in a nonroman script (either romanize all names according to a single table, the option chosen by the Library of Congress, or use romanized forms appearing in items issued by the body) (24.1A); (2) no provision for ignoring slight changes in names (24.1B); (3) a new format for sessions of legislatures (24.21D):

AACR 2: United States. Congress (87th : 1961-1962)

AACR 1: United States. 87th Congress, 1961-1962

and (4) a new format for some dioceses (24.27C2):

AACR 2: Church of England. Diocese of Ely.

AACR 1: Ely (Diocese)

### *Uniform Titles (Chapter 25)*

The rules on uniform titles are organized as follows:

1. "Use of Uniform titles" [purpose and guidelines] (25.1)
2. General rules
  - a) Basic rule (25.2)
  - b) Individual titles (25.3-25.7)
  - c) Collective titles (25.8-25.12)
3. Special rules (25.13-25.36) including
  - a) Legal materials (25.15-25.16)
  - b) Sacred scriptures (25.17-25.18)
  - c) Liturgical works (25.19-25.23)
  - d) Music (25.25-25.36)

The code presents (25.1) five questions on which to base the decision whether to use a uniform title in a particular instance. These questions are quite similar to the criteria suggested in AACR 1. Hagler has suggested that

their use in practice in the average North American library catalogue will largely be governed by their appearance on 'source' records from national bibliographic agencies. Their use by those agencies is not predetermined by AACR 2, but is left to be announced by those agencies.<sup>36</sup>

The Library of Congress has stated its position that "national cataloging agencies should formulate all uniform titles provided by the rules . . . and store this information in machine-readable records"<sup>37</sup> and has announced that it will begin to display all uniform titles when AACR 2 is implemented.<sup>38</sup>

With regard to the form of uniform titles, Hagler notes that

there are very few changes between the two editions . . . and these few result almost exclusively from the attempts (1) to use the same principles and forms for all uniform titles, no matter what the works involved, and (2) to divorce the rules for the formulation of a uniform title from the nature or content of any particular catalogue in which it may appear.<sup>39</sup>

A number of changes relating to use and form of uniform titles

from the practices of AACR 1 are to be noted.

*General Works.* If a separately catalogued part of a work has a title of its own, that title is to be used as the uniform title, rather than placing it as a subheading under the title of the whole work, resulting in the use of "The two towers" rather than "The lord of the rings. 2. The two towers" for Tolkien's work. (25.6A1). This rule is not followed for the Bible, certain other sacred scriptures, or for excerpts of music. Changes in the rules for collective titles include the use of "Selections" for collections previously labelled "Selected works" (25.9) and minor changes in the list of literary forms (25.10).

*Legal Materials.* As noted earlier, form subheadings are no longer used with names of jurisdictions for legal works such as constitutions, laws and treaties, which will now be entered under the name of the jurisdiction without a subheading, followed (in the case of laws and treaties) by a uniform title. (Uniform titles may also be used for constitutions according to the general provisions of the chapter, but there is no specific rule for them in the chapter.) Uniform titles for laws include (1) titles of single legislative enactments ("Copyright Act. 1962," "Field Monuments Act"), (2) names of subject compilations ("Agricultural code," "Licensing acts"), or (3) the collective title "Laws, etc.," which is to be used only for "complete or partial collections of legislative enactments other than compilations on a particular subject" (25.15). Uniform titles for treaties are quite similar in content to the earlier form subheadings. (25.16)

*Sacred Scriptures.* The *Encyclopaedia Judaica* is now the authority for names of the Hebrew scriptures, replacing the *Jewish Encyclopaedia*. For Buddhist scriptures, "Tipitaka" is added as a heading, and component divisions of the scriptures will be entered as subheadings e.g., "Tripitaka. Abhidhammapitaka," rather than directly, as at present.

*Music.* Changes include (1) fuller definitions of "title" and "work" (25.26), (2) provision for the use of the original language in all instances instead of one of the seven languages specified in AACR 1 (25.27A), (3) the use of the plural form for titles consisting solely of the name of one type of composition ("divertimenti," "sonatas," etc.), including items limited to a single composition unless the composer wrote only one work of the type (25.27B), and (4) a different form for special collections of works in one broad or specific medium, e.g., "Chamber music" rather than "Works, chamber music."

As Hagler has pointed out, two general changes in AACR 2 affect this chapter significantly: (1) "the choice and positioning of filing elements in order to simplify both human and machine filing," (2) wording of the rules or inclusion of examples "to recognize their applicability to nonbook materials."<sup>40</sup>

#### *Appendixes*

*Appendix A. Capitalization.* Appendix A, Capitalization, consists of three sections: (1) General rules 1-11, organized (except for rule 1,

dealing with initials and acronyms) by area of description, (2) rules for English (12-32), and (3) rules for foreign languages (33-52). Major changes from AACR 1 include (1) not capitalizing the general material designation (A.4G), (2) changes in the rules for capitalization of the names of documents (A.20) (Hagler suggests that "it may take some time to reach a consistent interpretation of what is covered by this specification"<sup>41</sup>).

*Appendix B. Abbreviations.* Following a general rule (B.1), there are three rules concerned with specific areas (B.2-4) and four other general rules (B.5-8). The list of "general abbreviations," as before, includes some qualified and limited to a particular area of the description. Among the changes from AACR 1, two are particularly noteworthy: (1) the list of place names that may be abbreviated does not include, as before, Canada, England, Germany, Ireland, Quebec, and Scotland (2) there is a sharp limitation on the use of abbreviations in headings, resulting in the use, for example, of "Department" rather than "Dept." (B.2) As noted in the section on implementation, which follows in this paper, the Library of Congress has announced that it will continue to use the abbreviation "Dept."

*Appendix C. Numerals.* As noted in Hagler, minor changes are made for (1) inclusive numerals, (2) some ordinal forms, and (3) following the usage of foreign languages.<sup>42</sup>

In addition to these specific changes, the University of Chicago Press *A Manual of Style* is specified as the general authority for matters of style. (0.11)

#### *Implementation*

The four major national cataloging agencies of the Anglo-American world—the British Library (BL), the Library of Congress (LC), the National Library of Australia (NLA), and the National Library of Canada (NLC)—decided in 1976 to adopt AACR 2 on 2 January 1980, but BL, LC, and NLC subsequently agreed to change the implementation date to 1 January 1981 following the recommendation of a group of librarians representing fifteen major library organizations meeting in Chicago, 3 August 1978.<sup>43</sup> The postponement also affected LC's decision to abandon its policy of superimposition, which had been announced to take effect at the time of adoption of AACR 2. The four agencies have adopted the name: ABACUS (Association of Bibliographic Agencies of Britain, Australia, Canada, and the United States) and have announced that they will publish AACR 2 interpretations made by the members, whether unanimous or not, in *Cataloging Service Bulletin*.<sup>44</sup> It is clear that the decisions and interpretations made by the national cataloging agencies as they apply AACR 2 in practice will be a major influence in the implementation of the code. The Library of Congress, seeking ways "in which the costs of implementation could be reduced both for the Library of Congress and for the library community at large,"<sup>45</sup> has announced a policy of

"gradual adoption"<sup>46</sup> of the code, under which certain existing headings that are not in agreement with AACR 2, but that are judged to be "compatible" with AACR 2 headings will continue unchanged after 1981. The most significant of these are (1) the continued use of the abbreviation "Dept." in headings, (2) the continued use of "House" rather than "House of Representatives" in the heading for the United States House of Representatives, and (3) the continued use of "Great Britain" rather than "United Kingdom." The Library has also identified eighteen categories of headings that will be changed under AACR 2, but not in such a way as to significantly affect filing arrangement and users' access.<sup>47</sup> (Examples include a change in the positioning of "ca." in dates and capitalization of corporate acronyms/initialisms.) For these categories, LC will continue to use the AACR 1 form in established headings and apply AACR 2 provisions to new headings. Further, three other changes, relating to (1) form of personal name for established authors using initials rather than full forenames, (2) the placing of titles of honor and address, and (3) the deletion of initial articles in uniform titles, have been announced. Tucker has stated that the list is "a closed one," and there is a possibility that the compatible headings may "be abandoned, perhaps bit by bit, at some time after 1981."<sup>48</sup>

In addition to these conscious modifications of the code, it has already been noted that there are some cases in which interpretations will be required because there will not be a consensus as to the meaning of a rule or as to which of two rules may govern in a particular instance. For example, Hagler has noted likely problems in interpretation of the phrases "created or controlled by a government" (24.17) and "a name that has been, or is likely to be, used as the name of another agency" (24.18).<sup>49</sup> and Tucker has suggested that the meaning of the phrase "collective thought" (21.1B2) may be subject to widely different interpretations.<sup>50</sup>

Tucker has also reported that the Library of Congress has encountered problems in attempting to apply the rules relating to series added entries.<sup>51</sup> Because of the necessity of distinguishing between different works which happen to have been published under the same title (e.g., "Technical report" and "The Citizen" published in Ottawa and "The Citizen" published in Vancouver), the Library of Congress and the National Library of Canada submitted to the Joint Steering Committee a set of "proposed guidelines for the formulation of unique titles."<sup>52</sup> The JSC committee has agreed that the guidelines are within the spirit of the rules and that AACR 2 will not be revised in a way that will contradict the details of the proposal.<sup>53</sup>

### *Conclusion*

Anglo-American librarians face a period of eighteen months in which to evaluate the impact of a number of changes in the structure of the bibliographic record prescribed by our cataloging code—some

resulting from basic changes in the provisions of the code, and some resulting from the application of the options. Among the latter, there will be differences resulting in some cases from the application of different options by different national cataloging agencies and in other cases from the application by a single agency of an option on a case-to-case basis. There is also indication that the next eighteen months will constitute a period of discussion and interpretation of the intent of the framers of the rules of AACR 2. Catalogers and other librarians have a unique opportunity and responsibility to identify any ambiguities and likely problems in the application of the new code in advance of its formal implementation. The American segment of the profession should address questions and comments to Allen Cohen, Chairperson, Committee on Cataloging: Description and Access of the American Library Association, at the Free Library of Philadelphia, Philadelphia, Pa. 19103.

#### References

1. Michael Gorman and Paul W. Winkler, eds., *Anglo-American Cataloguing Rules* (2d ed.; Chicago: American Library Assn., 1978), 620p.
2. Michael Gorman, "The Anglo-American Cataloguing Rules, Second Edition," *Library Resources & Technical Services* 22:209-26 (Summer 1978); Ronald Hagler, *Where's That Rule?* (Ottawa: Canadian Library Assn., 1979); "AACR 2," *Cataloging Service Bulletin* no.2:3-29 (Fall 1978); "AACR 2 Implementation Plans," *Cataloging Service Bulletin* no.3:3-7 (Winter 1979); Lucia J. Rather, "AACR 2 Options to Be Followed by the Library of Congress: Chapters 1-2, 12, 21-26," *Library of Congress Information Bulletin* 37:422-28 (21 July 1978); "AACR 2: Background and Summary," *Library of Congress Information Bulletin* 37:640-52 (20 Oct. 1978); Robert M. Hiatt, "AACR 2: Implementation Plans," *Library of Congress Information Bulletin* 37:710-12 (17 Nov. 1978).
3. The papers at this conference were almost evenly divided between discussions of the code and its parts and consideration of general questions. The former category includes presentations by Michael Gorman, Frances Hinton, Ronald Hagler, Neal Edgar, Gordon Stevenson, Barbara Gates, Åke Koel, and Joan Marshall. The latter includes discussions of "the politics of code revision" (Peter Lewis), "fundamentals of bibliographic cataloging" (Seymour Lubetzky), "AACR 2 and automation" (S. Michael Malinconico), the "unit entry" concept (Elizabeth Tate), implementation of AACR 2 at the Library of Congress (Ben Tucker) and "international implications of AACR 2" (Joel Downing). The papers are being edited by Doris Clack for publication by the American Library Association.
4. I am indebted to a number of colleagues, most notably Neal Edgar, Ronald Hagler, Marilyn Jones, Åke Koel, Phyllis Marion, Helen Schmierer, and Ben Tucker for insights relating to AACR 2 and the deliberations of the Catalog Code Revision Committee of the American Library Association, but the judgments expressed in the paper are ultimately my own.
5. "AACR 2: Background and Summary," *Library of Congress Information Bulletin* 37:647.
6. Gorman. "The Anglo-American Cataloguing Rules," *Library Resources & Technical Services* 22:211-12.
7. Hagler, *Where's That Rule?* p.99.
8. Ibid., p.90.
9. *ISBD(G): General International Standard Bibliographic Description: Annotated Text* (London, IFLA International Office for UBC, 1977).

10. Gorman, "The Anglo-American Cataloguing Rules," *Library Resources & Technical Services* 22:213.
11. Ibid., p.214.
12. "AACR 2," *Cataloging Service Bulletin* 2:5.
13. Ibid.
14. Gorman, "The Anglo-American Cataloguing Rules," *Library Resources & Technical Services* 22:217.
15. "AACR 2: Background and Summary," *Library of Congress Information Bulletin* 37:644.
16. *Anglo-American Cataloguing Rules*. North American Text (Chicago: American Library Assn., 1967), footnote 2, p.9.
17. Gorman, "The Anglo-American Cataloguing Rules," *Library Resources & Technical Services* 22:218-19.
18. Ibid., p.219.
19. Hagler, *Where's That Rule?* p.55.
20. "AACR 2: Background and Summary," *Library of Congress Information Bulletin* 37:647.
21. Hagler, *Where's That Rule?* p.56.
22. Rather, "AACR 2 Options . . .," *Library of Congress Information Bulletin* 37:425.
23. "AACR 2: Background and Summary," *Library of Congress Information Bulletin* 37:647.
24. For a discussion of JSC thinking on the entry of serials, see Gorman, "The Anglo-American Cataloguing Rules," p.219.
25. For a full discussion of the changes relating to treaties, see Hagler, *Where's That Rule?* p.64.
26. "AACR 2," *Cataloging Service Bulletin* 2:6-7.
27. "AACR 2," *Cataloging Service Bulletin* 2:25.
28. Rather, "AACR 2 Options . . .," *Library of Congress Information Bulletin* 37:426. (The Library notes further that "while not applying the option per se, the National Library of Canada plans to establish authors against a name authority data base that includes at least Library of Congress name authorities, thus increasing the frequency with which fuller name data or birth data are used. The British Library will not apply the two options in its printed publications, but may supply the information in its machine-readable records.")
29. Hagler, *Where's That Rule?* p.86.
30. "AACR 2," *Cataloging Service Bulletin* 2:9.
31. Ibid.
32. Ibid., p.10.
33. It is important to remember that the examples in chapter 24 consistently omit the name of the larger geographic area in which the local place is located, a practice that may not be in agreement with the practice of a particular cataloguing agency or the needs of a particular catalog (footnote 11 to rule 24.4C4).
34. Rather, "AACR 2 Options . . .," *Library of Congress Information Bulletin* 37:427.
35. Hagler, *Where's That Rule?* p.89-90; see also Gorman, "The Anglo-American Cataloguing Rules," p.223 and "AACR 2," p.12-13.
36. Hagler, *Where's That Rule?* p.107.
37. Rather, "AACR 2 Options . . .," *Library of Congress Information Bulletin* 37:427.
38. "AACR 2," *Cataloging Service Bulletin* 2:2.
39. Hagler, *Where's That Rule?* p.107.
40. Ibid., p.108.
41. Ibid., p.126.
42. Ibid., p.127.
43. "AACR 2," *Cataloging Service Bulletin* 2:3-4.
44. Cynthia J. Durance, "Summary Minutes of the Meeting on Cooperative Cataloguing of the British Library, National Library of Australia, National Library of Canada, and Library of Congress." *Library of Congress Information Bulletin* 37:682 (3 Nov. 1978).

45. "AACR 2 Implementation Plans," *Cataloging Service Bulletin* 3:3.
46. Ben R. Tucker, "Implementation of AACR 2 at the Library of Congress" (Paper presented at the International Conference on AACR 2, March 11-14, 1979, Tallahassee, Florida), p.9.
47. Hiatt, "AACR 2: Implementation Plans," *Library of Congress Information Bulletin* 37:711-12.
48. Tucker, "Implementation of AACR 2 at the Library of Congress," p.7.
49. Hagler, *Where's That Rule?* p.98.
50. Tucker, "Implementation of AACR 2 at the Library of Congress," p.15.
51. Tucker, "Implementation of AACR 2 at the Library of Congress," p.20-21.
52. "Statement on Unique Titles," submitted to the Joint Steering Committee for Revision of AACR by the Library of Congress and the National Library of Canada, March 1979.
53. Tucker, personal communication, May 10, 1979.

## REVIEWS

International Federation of Library Associations and Institutions. Joint Working Group on the International Standard Bibliographic Description for Cartographic Materials. *ISBD(CM): International Standard Bibliographic Description for Cartographic Materials*. London: IFLA International Office for UBC, 1977. x, 58p. ISBN 0-903043-16-5. \$12. Available in North America from: Canadian Library Association, 151 Sparks St., Ottawa, ON K1P 5E3.

As its title explicitly states *ISBD(CM)* is an international standard for the bibliographic description of cartographic material. Its primary purpose, as stated in the preliminary notes, is to facilitate international communication of bibliographic information by: (1) making records from different sources interchangeable, (2) assisting in the interpretation of bibliographic records across language barriers, and (3) assisting in the conversion of bibliographic records to machine-readable form. *ISBD(CM)* accomplishes these objectives by identifying bibliographic elements, prescribing their order, and specifying the standard punctuation between elements, thereby establishing a set structure for the bibliographic description of cartographic materials.

*ISBD(CM)* is not an isolated publication; to the contrary it is one of several published ISBDs each of which is intended to standardize the bibliographic description of the category of material it covers. Users of *ISBD(CM)* will also need to refer to parallel standards, including *ISBD(M): International Standard Bibliographic Description for Monographic Publications*, *ISBD(S): International*

*Standard Bibliographic Description for Serials, ISBD(NBM): International Standard Bibliographic Description for Non-Book Materials*. *ISBD(CM)* specifically states, in the introduction, that it and all other specialized ISBDs are fully compatible with *ISBD(G): General International Standard Bibliographic Description*. The degree of compatibility between *ISBD(G)* and *ISBD(CM)* is illustrated, within *ISBD(CM)*, by a comparative outline of the areas, elements, and prescribed punctuation used in the respective documents.

Although direct analogies can be made between many of the elements contained in the bibliographic description of cartographic materials and those contained in descriptions for monographs, series, monographic sets, and other nonbook material, descriptions for cartographic materials also contain bibliographic elements unique to the format. In addition, the organization and description of cartographic materials present unique requirements as to order, structure, and interpretation of bibliographic elements. A separate *ISBD(CM)* was developed in response to those requirements.

The first formal proposal for development of a separate ISBD for cartographic materials was made by the IFLA Subsection of Geography and Map Libraries late in 1973. The Joint Working Group on International Standard Bibliographic Description for Cartographic Material was established in October 1974 by the IFLA Subsection of Geography and Map Libraries and the IFLA Committee on Cataloging in cooperation and coordination with the IFLA International Office for UBC. North American representatives on the six-member working group were its

chairman, Hugo L. P. Stibbe of the National Map Collection, Public Archives of Canada, and David K. Carrington of the Geography and Map Division, Library of Congress.

*ISBD(CM)* and the recently published *Anglo-American Cataloguing Rules*, Second Edition (AACR 2) are complementary. In its introduction and preliminary notes *ISBD(CM)* states that it is specifically intended for use in conjunction with, or as a basis for, a cataloging code, and that it is not meant to be used as a set of cataloging rules. It does not, therefore, cover or include guidelines for determining form of headings, selection of main or added entries, selection of title, etc. However, *ISBD(CM)* does contain information of direct value in the cataloging of cartographic materials. In this respect, appendix II, which contains eighteen pages of international examples, is particularly useful.

The function of AACR 2, chapter 3 is to provide additional, supplementary guidelines and detailed instructions for the cataloging of cartographic materials. In this respect AACR 2, chapter 3 is entirely satisfactory in those instances in which the rules were derived directly from *ISBD(CM)*, *ISBD(G)*, or in accordance with or by analogy to AACR 2, chapter 1, but chapter 3 is inadequate and insufficient in providing guidance or interpretation for aspects of bibliographic elements unique to cartographic materials. In my judgment this resulted from the AACR 2 editors' lack of experience in the actual cataloging of cartographic materials, and/or inadequate provisions for obtaining advice or input from inexperienced, practicing catalogers of cartographic material.

Although AACR 2, chapter 3 is predominantly compatible with *ISBD(CM)*, there are noticeable differences and inconsistencies between the two documents, including those

contained in the following areas or bibliographic elements: status of accompanying pamphlets or brochures in the respective chief sources of information, status of the mathematical data area as to language and script of the description, general materials designators, examples in the physical description area, numbering within series and subseries, and order and content of note areas. Given the published commitment of the Joint Steering Committee for Revision of AACR to "... continued conformity with *ISBD(M)* as a basis for the bibliographic description of monographs, and commitment to the principle of standardization in the bibliographic description of all types of material ..." the differences and inconsistencies between *ISBD(CM)* and AACR 2 are inexplicable.

*ISBD(CM)* has its own faults. The mathematical data area instructions for celestial charts, for example, have already been amended. The omission of definitions for specific materials designations listed in appendix I is a serious deficiency. Nevertheless, the overall quality of *ISBD(CM)* is excellent. It reflects the experience and knowledge of practicing map librarians and map catalogers and is definitely successful in meeting the primary objectives of *ISBD(CM)*, i.e., attainment of maximum compatibility with other formats while concomitantly ensuring accommodation of the bibliographic characteristics or interpretations unique to cartographic materials.

The importance and significance of *ISBD(CM)* to map librarianship cannot be overemphasized. It is a true benchmark in the evolving documentation for the cataloging of cartographic materials. The development and publication of a separate ISBD for cartographic materials has a significance to map librarianship far beyond its stated objectives. By increasing the potential for international

exchange of cartographic information via library-based, international, MARC format compatible information networks, *ISBD(CM)* has made a significant contribution toward eventual attainment of universal bibliographic control of cartographic materials. Through its symbolization and treatment of cartographic materials as discrete bibliographic entities *ISBD(CM)* promotes recognition of the research value of cartographic materials by both libraries and users. In effect, *ISBD(CM)* assures cartographic materials of a place in the trend toward universal access to library information regardless of format and is therefore part of an ongoing process that is converting libraries from book-oriented institutions to information-oriented institutions.

As a result of improving efficiency in the on-line cooperative cataloging of monographs and the development of better rules for the cataloging of cartographic materials (derived from *ISBD(CM)*), I foresee increased diversification of original cataloging at institutions participating in on-line cooperative cataloging with attendant increased emphasis on the cataloging of cartographic material and other nonbook material. This trend will in turn improve the service and research capabilities of participating libraries to the ultimate benefit of their users.

For the preceding reasons I recommend the purchase of a complete set of ISBDs, including *ISBD(CM)*, by map libraries involved in or committed to the cataloging and control of their collections, and by technical services units in general libraries.—John

*R. Schroeder, Head, Cataloging Unit, Geography and Map Division, Library of Congress.*

#### Reference

1. Michael Gorman and Paul W. Winkler, eds., *Anglo-American Cataloguing Rules* (2d ed.; Chicago: American Library Assn., 1978), p.vii.

Lancaster, F. W. *Toward Paperless Information Systems*. New York: Academic Press, 1978. xii, 179p. ISBN 0-12-436050-5. (Library and Information Science Series) \$13.50.

This is a book filled with thought-provoking images of future information-handling systems built from machine methods of data input, storage and display; systems in which information, often in the form of text, is transmitted from originator to final file or archive without appearing in print. Such systems are not far from actuality, and one such prototype installation is used as an illustration. Indeed, here the inevitability of such systems is convincingly presented by an obvious advocate.

Lancaster presents a thorough, yet nontechnical, description of paperless information systems designed for and tested by the intelligence community. Then he goes on to describe the adaptations necessary to such a system for its broader application as an electronic information system for the scientific and technical community as a whole. He points out the feasibility of such systems based on current technology and adds further arguments for their adoption on the basis of costs and benefits.

A picture is offered of a system in which the scientist can use an office or laboratory terminal to generate and analyze data, prepare text, transmit text to a publication or distribution source, receive almost immediate refereeing reaction from colleagues, revise text and submit it to general files available for search, retrieval and distribution.

Problems associated with implementation are also discussed. These include technological, intellectual, social, and psychological ones, ranging from security and quality to copyright.

Several chapters are devoted to general description of information

storage and retrieval systems and to communication in science and technology as these relate to the electronic system proposed. These might, it seems, rather have been presented in greater depth or have been required of the reader before approaching this text. The simplifications necessary to fit such broad topics into single chapters have lessened the appeal of the book for the advanced reader while still leaving the novice with only an overview.

The effects of such electronic systems on "traditional" library functions and structures, and the subsequent effects on library education are discussed by Lancaster in a concluding chapter on the role of the library in a paperless society. He points out the following as being potential parts for libraries to play in such systems: (1) providing on-line access to resources for individuals who do not have their own terminals; (2) serving as a center in which trained personnel are available to assist users in exploiting resources; (3) serving as a printout center with high quality, high cost printing equipment not readily available to the average system user; (4) acting as a collection, cataloging, and indexing center for materials of local interest only; (5) providing materials to large numbers of users while also paying electronic publishers an access fee; (6) service as a source of increased *intellectual* accessibility through generation of higher quality indexing, selection and/or dissemination systems; (7) integrating electronic systems with those already in existence and likely to remain in printed form (card catalogs for older materials, for example); (8) construction of indexing languages and other tools for exploitation of machine-readable resources.

Lancaster points out that use of electronic systems will also change the education and training of librarians.

He sees this as being primarily a process of "de-institutionalization" of the librarian, so that a librarian is no longer defined in terms of "what goes on in a library." He thus sees a shift in library school curricula to placing a major emphasis on knowledge of machine-readable resources and effective methods of exploiting them.

The one hundred forty-two-item list of references serves as a useful overview of progress in electronic information processing for the last decade.

The reader is left with a broadly based understanding of both the origins and implications of paperless information systems, from the convincing arguments for their benefits, to the significant design problems and costs involved. And, this is all done in a low-keyed, understandable manner that makes such systems all the more feasible and closer to reality.—*Pauline V. Angione, Graduate School of Library Science, Rosary College.*

*Library Conservation: Preservation in Perspective.* Ed. by John P. Baker and Marguerite C. Soroka. Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1978; distributed by Academic Press. xiii, 459p. ISBN 0-87933-332-4 (Publications in Information Sciences) \$45.

In the first selection of this valuable reader, Harvard's Ed Williams gives us this not altogether facetious summary of the state of preservation affairs: "Everything in library collections is deteriorating today, was deteriorating yesterday, and will continue to deteriorate tomorrow although we ought to retard the process." The thirty-four chapters (by twenty-nine persons and three committees) elaborate this theme, delving into the causes, tracing the developing awareness of deterioration, and describing individual and collective efforts to control or reverse it. Editors Baker

and Soroka have performed a noble task, sifting through—no doubt—thousands of pages of good and not so good literature in the field of conservation/preservation (no universally accepted definitions yet to distinguish the two terms, though the editors offer some), to give us a thirty-year (1946–76) cross-section of professional, philosophical, technical, scientific, and administrative thought, representing nearly all the names generally associated with the rise of preservation as a professional concern for librarians: Banks, Barr, Barrow, Cockerell, Haas, Henderson, Langwell, Poole, Roberts, Spawn, Wessel, Williams (E, G, and JC), etc.

There are dangers in the "selected readings" approach to any subject. No matter how one thoroughly combs and judiciously selects and carefully organizes, there is an inevitable unevenness of tone and level of detail, an occasional gap, a surprising omission, and too frequent repetition of the major themes. Within these limitations, the job has been well done. The selections are arranged in ten sections, each one preceded by a brief commentary and list of additional readings, and presented in a logical sequence to give a reasonably comprehensive introduction to preservation theory and current practice.

There are flaws. There is perhaps more than we all need to know about the nature of inks—sixteen pages, compared with only ten for paper. The technical data in some articles have been superseded by new developments—unavoidable, but the commentaries could have done more to point this out. The commentaries themselves are uneven, seeming to shift assumptions about the level of the reader's knowledge from one section to the next—the result of two editors?—and not consistently providing background about each author and the context of his/her work. The

latter is particularly unfortunate, in this reviewer's view, because this volume will certainly become a text for proliferating courses on preservation. How will the novice librarian discover that Pelham Barr, whose observations on the difficulties of locating conservation activities within traditional library organization charts rings as true today as when first published in 1946, was the engineer-poet who unobtrusively but very effectively got the library-binding industry through the second quarter of this century? Peacemaker in the cutthroat Depression and recovery days, founder and executive director of the Library Binding Institute until his death in 1948, successful negotiator for critical supplies during World War II shortages, he was above all champion of the idea that *librarians* must set the standards for the industry, and a tireless diplomat who compelled both binders to accept such direction and librarians to shoulder the responsibility. One hates to lose the sense of personality that has graced (and spiced) our professional history thus far.

Two selection criteria seem to have been "normally no more than one piece per person" and "include as many of the well-knowns as possible without repeating topics." While not an unreasonable approach, this resulted in using not always the best or most representative work of some individuals. And the absence of any excerpts from the work of the late Verner Clapp, or the very lively Carolyn Horton and Peter Waters, seems unaccountable (all are mentioned in commentary and articles, at least).

But it is churlish to complain about what isn't there when what is there is so manifestly useful. Many of the items brought together in this volume—journal and encyclopedia articles, book excerpts, association publications, one (Henderson's

"Memorandum on the Conservation of the Collections") hitherto unpublished—have not been readily accessible. Brought together now, they provide both an introduction to this critically important field for newcomers, and a solid reference tool for old-timers in search of a fresh quotation to buttress a request for more money to bind/restore/microfilm. . . .

A word on format: the book consists of photo-offset reproductions of the original articles, some reduced significantly to fit the book page. The quality of reproduction is uniformly high, but the variations in typeface, density, margins, and so forth are disconcerting, and the inconsistent pattern of running headlines (i.e., whatever appeared in the original) is sometimes confusing. If this economical production approach had resulted in a modest price one would feel less inclined to grumble, but the book lists at \$45! Now let's see, at a nickel a page at the copy center across the street, for 449 pages of text, that's \$22.45, plus something for that good sturdy binding, and some more for the pretty good index, and something to the editors for their labors and commentaries, and. . . . But never mind, it's like the price of food and gasoline: if you need to eat, or go somewhere, you pay no matter how outrageous the price. If your library needs to pass its collections on to the next generation, get this book—and read it.—*Pamela W. Darling, Head, Preservation Department, Columbia University Libraries.*

Smith, Lynn S. *A Practical Approach to Serials Cataloging*. Greenwich, Conn.: JAI Press, 1978. xx, 424p. ISBN 0-89232-007-9. \$32.50. (Foundations of Library and Information Science, v.2)

There is no doubt that the author has done a great deal of in-depth research on the history of serials pro-

cessing, and that she knows serials cataloging inside out and upside down. She has presented an excellent review of serials processing from the time serials were first recognized as "pesky critters" to December 1978; it seems a shame that this book was published before the advent of *Anglo-American Cataloguing Rules*, second edition. Written in an informal style and abounding with colloquialisms, her review is nonetheless detailed, accurate, and well documented. The many definitions of a serial in her introduction set the tone for the remainder of the book—how can one maintain adequate bibliographic control over that which cannot be adequately defined? It can be done, the author maintains, but only by the serials cataloger (the heart and soul of serials processing); only the serials cataloger has the expertise to determine the all-important main entry without which central serial records cannot be kept.

The major portion of the text is devoted to the application of the *Anglo-American Cataloguing Rules* (1967) to serials cataloging, giving very detailed explanations and interpretations of the various rules. To benefit from these, the reader must be as familiar with the rules as is the author or be prepared to use the book with a copy of the AACR in hand. The "practical approaches" given for descriptive and subject cataloging and for subject classification, which all serials catalogers love to do, are not always practical, necessary or affordable even in major research libraries. Although various options are given for each step in serials processing, the use of the conditional "should"—"they [the patrons] should find complete access under all entries" (p.59), "all serials should be classed" (p.182), "all volumes should be analyzed" [in monographic series] (p.207), "the following statistics should be kept"

(p.293)—leaves no doubt as to which option the author feels is correct. From the complex cataloging and record keeping suggested one gets the impression that the author has never worked in a library with a tight budget.

Automation is mentioned where applicable throughout the book, and in one chapter the advantages of being able to manipulate by machine traditionally manual records are extolled; however, nowhere does the author give serious consideration to creating records specifically for access by machine. In discussing on-line shared cataloging no advice is given on accepting records from other libraries—only suggestions on how to “upgrade” them. The overview of the programs attempting to standardize bibliographic control of serials—CONSER, ISDS, NSDP, *ISBD(S)*, etc.—will be a great help for beginning librarians and reentries.

The examples of catalog cards and work forms that illustrate the text are excellent. The flow charts may be useful for a large, well-staffed integrated serials section. The appendixes contain much useful data and appendix C listing generic titles is worth its weight in gold.

As a history of serials processing to date, the work has great and lasting value, but it will serve as a practical approach to serials cataloging only for those institutions that have a high ratio of staff to titles or that plan to take an ostrich attitude toward AACR 2.—*Lynn M. Coppel, Coordinator, Periodicals Section, Library, California State University, Fullerton.*

Conference on Cataloging and Information Services for Machine-Readable Data Files, Airlie House, 1978. *Report on the Conference on Cataloging and Information Services for Machine-Readable Data Files, March 29-31, 1978, Airlie House,*

*Warrenton, Virginia.* Arlington, Va.: MRDF Conference Secretariat, DUALabs, 1978. iii, 210p. \$6. (Available from Data Use and Access Laboratories, Suite 900, 1601 N. Kent St., Arlington, VA 22209)

A machine-readable data file (MRDF) is “a body of information coded by methods that require the use of a machine (typically but not always a computer) for processing. Examples include files stored on magnetic tape, punched cards, aperture cards, disk packs, etc.”<sup>1</sup> Fifty-five experts in cataloging and data archives met at Airlie house to identify characteristics of MRDF within the research environment, to study current efforts at control of MRDF, and to begin shaping a national system of accessing these data files.

The first two-thirds of these proceedings cover the plenary sessions of the first day: analysis of the problems currently faced in controlling MRDF and the state of the art in MRDF production, particularly in the federal government environment. A broad sampling of representatives from federal agencies as diverse as those responsible for health statistics and environmental data, with controls of their own MRDF production ranging from complex multilevel indexes to no immediate plans for control, discussed their current status. Strong support was given by all participants for establishing mechanisms to identify, analyze, and disseminate MRDF with particular emphasis on the availability of MRDF resulting from federally funded projects.

For many librarians this concern may seem irrelevant to their collections and/or patrons, but even the census data in print are sometimes cited inadequately. Mr. Glimpse from the Bureau of the Census notes here that “even with the 1970 census summary tapes, users have referenced these files in research reports

in various ways often leaving little ability for readers to determine which count and file were being used . . ." (p.68-69). Yet these tapes are among the widest known and distributed MRDF in the United States!

After describing MRDF and summarizing some of the current projects, the final third of the proceedings covers the working group discussions and recommendations for four different areas: (1) technical issues of cataloging, (2) operational procedures, (3) products and services to result from bibliographic control, and (4) user interests and needs.

Conference participants generally agreed that the *Anglo-American Cataloguing Rules*, 2nd edition (AACR 2), chapter 9 rules were a good start at standard bibliographic control for MRDF, although at least two other levels of description for MRDF are necessary prior to computer manipulation of a file by a user. These bibliographic records were felt necessary in machine-readable form themselves to facilitate distribution and access of the MRDF. Participants recommended, as a first step, testing the AACR 2 rules widely to confirm their utility as an international standard. Both federal and private agencies have volunteered to contribute cataloging to this effort.

The second stage identified by participants is evaluation and dissemination of the test cataloging and its analysis by the MRDF secretariat. In addition, producers of these MRDF are to be involved in reviewing the information needs of the archivists and catalogers in order to assess their ability to assist the effort with internal labelling protocols.

Further meetings in this effort to create a national network for MRDF are anticipated. These proceedings provide ample opportunity for the novice in data archives and MRDF to read key articles and the state-of-the-art reviews for 1978. They are

relatively free of jargon and should be followed by review of AACR 2 chapter 9 and discussion with local data users—and reaction to the MRDF Secretariat.—Carolyn Kacena, Head, Catalog Department, University of Arizona Library, Tucson, currently Visiting Assistant Professor, Graduate School of Library Science, University of Illinois, Urbana-Champaign.

#### Reference

1. Michael Gorman and Paul W. Winkler, eds., *Anglo-American Cataloguing Rules*. (2d ed. Chicago: American Library Assn., 1978), p.567.

*Studies in Micropublishing, 1853-1976: Documentary Sources*. Ed. by Allen B. Veaner. Westport, Conn.: Microform Review, 1976. (Microform Review Series in Library Micrographics Management) 489p. ISBN 0-913672-07-6. \$22.50.

*Microforms and Library Catalogs: A Reader*. Ed. by Albert J. Diaz. Westport, Conn.: Microform Review, 1977. (Microform Review Series in Library Micrographics Management) 282p. ISBN 0-913672-16-5. \$17.50.

Librarianship is a profession that is presumably expert in accessing the published literature. One wonders then at the number of packaged sets of reprints, otherwise known as "readers," directed to the library market. One of the most extensive reader publishing programs is the Microform Review Series in Library Micrographics Management. Eight titles have been published or announced, each dealing with a different aspect of the utilization of microforms in libraries: for example, serials management and microforms, government documents and microforms, and microforms management in special libraries. While it is not the intent here to review the entire series, it is questionable that a lit-

erature, which is not particularly known for the depth of its research or the breadth of its insights, can support a publishing venture of this magnitude. Judging from the two volumes under consideration, the results are mixed.

Veaner's *Studies in Micropublishing, 1853-1976: Documentary Sources* brings together for the first time many of the key papers on micropublishing. As Veaner notes in the preface, the book is really about microrepublishing, rather than micropublishing, the two terms having been synonymous until recently. The relationship between micropublishing and librarianship is highlighted in the foreword, where Frances Spigai states: "While micropublishing shares many characteristics with other evolving technologies, it has at least one unique facet: It is the only information technology today whose application history has been shaped by librarianship" (p.19-20).

The volume is divided into ten sections, each containing various articles on a specific aspect of micropublishing, such as collection development, user problems, or newspaper micropublishing. A thoughtful introduction by the editor and a list of additional readings precedes each section. Perhaps the most interesting part of the book is the one on micropublishing history, which includes among other things Sir J. F. W. Hershel's original suggestion of the idea of micropublishing in an 1853 communication to the *Athenaeum*, two translations from the French of articles by Robert Goldschmidt and Paul Otlet, and a fascinating excerpt from Fremont Rider's *The Future of the Research Library*.

Veaner has, on the whole, selected carefully and wisely the articles for this volume. Opposing viewpoints are presented, touching not only upon micropublishing's advantages, but upon its limitations as well. Library

school students and microform librarians will therefore find this book to be a useful adjunct in their work.

The Diaz book *Microforms and Library Catalogs* comes at a timely moment. With the imminent implementation of the second edition of the *Anglo-American Cataloguing Rules*, interest is running high in both the microfilming of traditional card catalogs and the production of new catalogs using computer output microfilm techniques.

The volume is divided into three parts: microforms as an intermediate step in the production of catalog cards, the microfilming of existing card catalogs, and the use of computer output microfilm to create new catalogs. Most of the articles are case oriented, describing specific applications at particular institutions. They generally fall into the category of the "how we did it good with microfilm" variety.

The first section deals with the use of microfilm to produce catalog cards at Harvard University, the Boston Public Library, and the University of North Carolina. While these articles may be of slight historical interest, the technologies described have little relevance to the card production methods used today.

The articles in the second section describe the efforts of various libraries to microfilm their card catalogs. Some valuable insights are contained in the report by the New York Public Library to the Council on Library Resources. The report describes an investigation to determine the feasibility of using microfilm as a substitute for the traditional card catalog, and is one of the few in the entire volume that deals substantively with the question of user acceptance of microfilm in place of the card catalog.

The section on computer output microfilm (COM) catalogs bears a distinctively British flavor, reflecting the

early involvement of British libraries with this technology. Unfortunately, the choice of articles leaves much to be desired, containing a significant amount of needless repetition. As an example, there are two survey articles describing COM usage in British libraries, followed by three articles describing in more detail applications included in the surveys. Two separate articles describe the same application at the Westminster City Library. Finally, it should be noted that the reproductions of COM catalog printouts are uniformly poor and in some instances illegible.

While the production and use of microfilm catalogs is a topic of high current interest, librarians seeking information on the replacement of traditional card catalogs with microform counterparts would do best to turn elsewhere than to this volume for guidance.—Howard Pasternack, *Systems & Development Librarian, State University of New York at Stony Brook*.

Cabeceiras, James. *The Multimedia Library: Materials Selection and Use*. (Library and Information Science) New York: Academic Press, 1978. xv, 275p. ISBN 0-12-153950-4. \$13.

Recognition of the value of the multimedia approach to formal and informal learning processes has resulted in the need for a synthesized treatment of acquisitions and use within the covers of one book. Financial constraints also dictate that we attempt to procure the best appropriate equipment and software with our limited dollars. At the outset the author of this book, a professor of instructional technology at San Jose State University, states that it is "intended primarily for the student of librarianship" (p.14) but "could well serve as a convenient handbook to the in-service librarian with limited experience in the area of nonprint

media." Conveniently, in the process of treating the topics indicated by the title, advice is given on book reviewing and evaluation. The statement that "the finest bibliography ever produced will suffer greatly if typographical errors detract the reader from the bibliographic content" (p.47) foreshadows the contrast between the author's caveats and his own practices.

After a pep talk about coping with change and developing an "acceptable philosophy for the present and future" (p.8) there is a plea for using the systems approach to selecting materials and a simplified explanation of flow charting. Although evaluation grids, which involve a systematic approach to evaluation of materials, are included in several chapters, there is no further mention of the systems approach.

The major portion of the book is devoted to discussion of the nature of different media forms, including periodicals, newspapers, pamphlets, microforms, and books, as well as the usual audiovisual forms. Some of the groupings of materials, such as globes, maps, models, realia, games, and simulations, together in the same chapter are unusual. 16mm and 8mm films each merit a separate chapter. The chapter on periodicals, newspapers, and pamphlets includes references to pictures and government documents in the bibliography, though they are barely mentioned in the text.

There is an extended discussion of ideas to consider in developing a book selection policy, but the same standards are not applied to the other media covered. Since treatment of books comes toward the end of the work, the ideas need to be applied retrospectively to the other forms. The organizational problems of the book could have been avoided had the author chosen to devote general chapters to policy making, materials

and equipment evaluation, materials use, and similar topics, rather than treating each form as isolated from the others. In order to give some attention to the "use" noted in the book's subtitle, he should have covered other important topics such as bibliographic control, materials integration, and circulation procedures, which are not treated at all.

Other flaws permeate the text. There are errors of fact, such as several definitions of "serial," none of which is correct, and confusion over the meaning of AC and DC electric current. The discussion of copyright is garbled and misleading, and the explanation of map scale is tied to a confusing method for determining the representative fraction for a globe.

Citation of earlier rather than current editions of standard works such as *Guide to Reference Books*, *Books for College Libraries*, *Building Library Collections*, *Guides to Educational Media*, *Programmed Learning*, and numerous other titles are commonplace in chapter bibliographies. In some cases later editions are cited in other chapters, but the same work is rarely cited in the same bibliographic style. Some chapter bibliographies include items that have no relevance to chapter content, but many pertinent works are omitted. In discussing equipment there is no mention of *Library Technology Reports*. The brief treatment of film rental as an alternative to purchase ignores the Bowker/CUFC *Film Locator*. *Magazines for Libraries* is not cited in the chapter on periodicals, nor is *Microform Review* noted in relation to that medium. Many pertinent publications of the Association for Educational Communications and Technology are omitted.

Misspellings of names and misplacement of words in titles cause some items cited in bibliographies to be irretrievable. Among the most

unique are Woodkrutch, J. W. for Krutch, J. W., and Coyote University Press for Loyola University Press.

The index is sketchy, with references seemingly limited to words taken from paragraph headings and chapter subdivisions. While in no way limited to one chapter, the index entries for "Hardware, selecting" and "Software, selecting," lead only to the chapter on programmed instruction. Many topics discussed in the text have no index entries at all.

Such a negative review must suggest that books such as this should be ignored in the hope that they will fade away. However, this book comes from a reputable publisher and is part of a series of interesting and worthwhile titles. Without any consideration of its merit, this book will be purchased. We need the information it could have contained, and, admittedly, isolated parts of it are accurate and useful, but taken as a whole the faults far outweigh the merits, and use as a textbook would be most unfortunate.—*Suzanne Massonneau, Bailey Library, University of Vermont.*

Chan, Lois Mai. *Library of Congress Subject Headings: Principles and Application*. Littleton, Colo.: Libraries Unlimited, 1978. 347p. ISBN 0-87287-187-8. (Research Studies in Library Science, no.15) \$17.50/U.S. and Canada; \$21/elsewhere.

Chan's recent work on LC subject headings is a most welcome addition to the literature on that branch of cataloging and is, within its scope, a definitive work on the topic. While it has the expected introduction to the problem of subject analysis with an elucidation of various historical views on aims and performance, the focus is sharply on the LC system and what it is today. In Chan's own statement the work is descriptive and not prescriptive (and the chapter on "Future

prospects" is too general to invalidate the statement). The system is laid out clearly, both in terms of the forms of subject headings, and in their application by catalogers at the Library of Congress. The author has limited her insertions of the philosophy of subject headings to quotations from her predecessors such as Cutter and Haykin and has refrained from recommendations for change. The value of the work as a reference and guide is enhanced by this limitation, since it avoids suspicion of conscious or unconscious inclusion or omission of facts to buttress the author's argument. And a valuable guide it is indeed. By synthesizing material from the introduction to the 8th edition of *Library of Congress Subject Headings*, items published in *Cataloging Service Bulletin*, and gleanings from unpublished loose-leaf instructions to catalogers at the Library of Congress, Chan has produced a compact yet all-inclusive guide to current subject heading practice within the LC system. With this tool, catalogers at LC and in other institutions should arrive at close to identical assignment of subject headings; that has never been possible up to now without consulting a multitude of sources. The work is also surprisingly up to date; it was published in August 1978, yet it includes material from the winter 1978 *Cataloging Service Bulletin*. Since the publication postdates the period of greatest modification of practice in the subject heading field (mid-1970s), its guidelines should remain valid for quite some time.

By bringing all current practices in the formulation and application of LC subject headings into such close juxtaposition, Chan both explicitly and implicitly reveals inconsistencies in the system, some reasonable, some eternally mysterious. At the same time the mere encoding of practices in such a definitive form encourages

expectation of increased consistency in cataloging individual titles and similar works.

The level of accuracy approaches perfection, since it was proofread for that aspect at the Library of Congress before publication. I might cavil at some of the choices of illustration, but they do not affect the validity of the guidance given to the cataloger. An occasional explanation may not be immediately grasped but this is largely an inherent consequence of legalistic delineations of similar but not identical situations. The only statement (p.70) that needs correction directly concerns the LC publication *LC Period Subdivisions under Names of Places* (1975). This list is now superfluous since all material published therein has been incorporated into *Library of Congress Subject Headings* and not just additions since 1975.

If I felt any disappointment with the work it is in the index. I could not always find an entry into the work at first stab, yet this capability is certainly of high priority in a work that itself deals with reader accessibility to printed information. And again this would seem doubly important after past inadequacies experienced by catalogers in dealing with indexes to the two (LC and Dewey) classification systems and the earlier edition of the *Anglo-American Cataloguing Rules*.

I presume the Library of Congress is properly grateful that Chan's new work has relegated Haykin's *Subject Headings* (1951) to the status of a historical document that the Library of Congress no longer should consider updating. While it was a most useful guide in its day, some of the author's reasoning is no longer clear, practices have changed, predictions have gone awry, and at best it never provided the precise instruction for understanding or applying the system that is obtained from the current work.—*Edward J. Blume, Oxon Hill, Maryland.*

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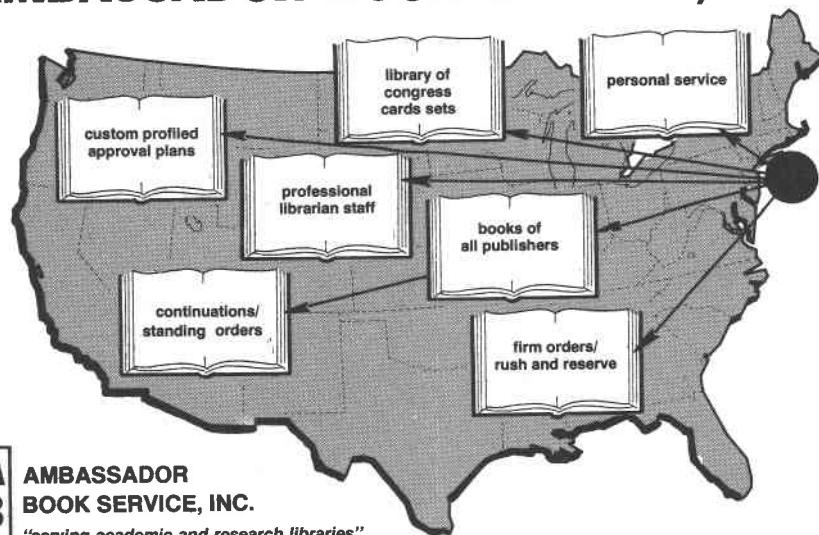
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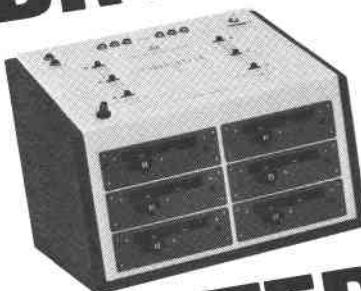
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there's a world of material in them for other  
writers, even playwrights.

Plays are becoming big business these days.  
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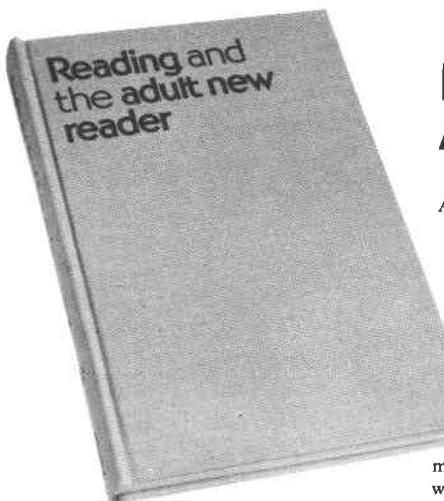
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