CALENDAR OF EVENTS

OCTOBER

3—1:00 Library Educator's Division—OSU
9—9:30 to 3:30 ODL/FOLIO Workshop—ODL
10—9:30 to 3:00 Reference Division Workshop—OKC, Belle Isle
14—10:00 LDC Meeting—ODL
16-17—OEA Most Important Employees Workshop
17—10:00 Executive Board—OKC, Belle Isle Branch “B” Room
30-Nov. 1—SWLA—San Antonio

NOVEMBER

6—State Department Workshop—Enid Vo-Tech
7—Copy due for President’s Newsletter
7—SDE Workshop—Hooker High School
10—NAC
11—10:00 FOLIO Exec. Board/Board of Directors—OU, Norman
13—SDE Workshop—Tahlequah, NEOSU Student Union
14—SRRT Meeting
17-21—Children's Book Week
18—SDE Workshop—Ada, East Central Student Union
18—10:00 LDC—ODL
20—SDE Workshop—Norman, Public Library
21—10:00 Executive Board—Stillwater

DECEMBER

2—SDE Workshop—Lawton Public Library
16—10:00 LDC—ODL
19—10:00 OLA Executive Board—ODL

To conserve space, the Executive Board voted to discontinue publication of all official minutes. Copies of the minutes must now be obtained from the Executive Secretary.

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**OKLAHOMA LIBRARIAN**

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THE OKLAHOMA LIBRARIAN is the official bulletin of the Oklahoma Library Association. It is indexed in Library Literature. The inclusion of an article or advertisement does not constitute official endorsement by the Association. It is mailed to each member of the Association upon payment of his annual dues.


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Oklahoma Librarian, October, 1980, Vol. 30, No. 4
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Institutional (Library) Membership:
- Income up to $50,000: $15.00
- $50,000 to $499,999: $30.00
- $500,000 to $999,999: $50.00
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All dues are annual and payable by January 1. For a membership form, contact the Executive Secretary.

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President's Message

OKLAHOMA IMAGE: OUR LEGACY

Aarone Corwin

Oklahoma Image, a statewide humanities project, funded by the National Endowment for the Humanities and sponsored by the Oklahoma Department of Libraries and the Oklahoma Library Association will soon reach another plateau on its developmental chart. October 1, 1980 signals the official end of the highest funded library project in the history of the NEH. OLA members can be proud of this achievement.

OLA has been one of the sponsoring organizations of the project since its inception in 1977 when a six-month planning grant in the amount of $53,380 was awarded. This money was utilized to research Oklahoma's history and existing resources and to determine the materials and methods which would make this information readily accessible to the general public.

At the end of the planning grant period, a second proposal was submitted to NEH to fully fund the project. Dr. Joseph Duffy, Chairman of NEH presented an award of $300,000 during a special awards ceremony held at the Oklahoma Department of Libraries. This amount was later increased to $400,000.

This money has been utilized most effectively. With the assistance of Jordan Associates, an advertising firm, the Oklahoma Image Project created an audio series of twenty-six five minute vignettes about the colorful events and individuals who contributed to Oklahoma's unique past. This series was distributed to radio stations and libraries across the state.

NEWCOMERS TO A NEW LAND, the ten booklet series about various ethnic groups contributing significantly to the settlement of Oklahoma, was the second project undertaken. Its reception by the public is obvious when one realizes that several of the titles are already being reprinted and the series has only been available since last April. There is even the possibility that a television series will soon be produced in Tulsa, based upon the booklet.

A statewide contest, seeking rare photographs depicting life in Oklahoma prior to 1940, garnered hundred of family treasures. Some of these photos were incorporated into the larger communities. Many of these photos have become the basis for local history collection development in our libraries. The quality of the photographs, their interpretive captions, and the elegant display panels have brought marvelous reviews from all who have seen it.

Those communities which were too small to host the historical photographic exhibit on its first trip around the state, will still be able to enjoy its informative and entertaining photos through another format—namely, the audiovisual series. These four slide/tape programs entitled: "Newcomers to a New Land," "The Good Life," "Main Street," and "Growing Up in Oklahoma," have been distributed to each of the public library systems and to some of the larger non-system libraries.

Having all of these superior materials at our disposal is worthless unless they are being utilized by the public. When first developed, it was hoped that 75% of Oklahoma's 2.5 million residents would be reached by Oklahoma Image. There is no reason why that percentage could not be raised. We encourage you to reach out within your own communities to see how Oklahoma's broad cultural heritage can best be shared from generation to generation.

The Oklahoma Image staff have conducted regional workshops on how to effectively use these newly produced materials. They have created a programming guide and numerous bibliographies and brochures for use and distribution by librarians in their communities. They have also provided a consultant to assist local libraries with their programming efforts.

Officially, Oklahoma Image will end October 1, 1980. However, a request has been submitted to the NEH for a one-year extension. If approved, the additional funding will allow twenty-five more towns in Oklahoma to view first-hand the historic photographic exhibit. It will also provide for ten more public libraries to conduct community awareness workshops.

We are indebted to the Oklahoma Image staff and to the Oklahoma Department of Libraries for providing Oklahoma citizens a legacy of which to be proud. Whether or not the Oklahoma Image Project receives the requested one-year extension is unknown at the time of this writing. Regardless of the NEH's decision, it is anticipated that the efforts of a multitude of individuals will continue to be nurtured in every community library, school, historical society, museum, and home. Hopefully, we will see 100% of our state's population affected by Oklahoma Image before the celebration of our 1982 Diamond Jubilee.

Let us hope that our continued search for our "roots" will be a never-ending quest and that our appreciation for Oklahoma's rich cultural heritage will continue to flourish with time.

We have a right to be proud of Oklahoma's image. It is a tribute to us all!
The Proposed Oklahoma Library Network: Regional Hearings

Beverly A. Jones
Network Coordinator
Oklahoma Department of Libraries
Lawton Public Library, October 24, 1980
Edmond, Central State University Library, November 7, 1980
Tulsa City-County Main Library, November 14, 1980

ABSTRACT

Formal hearings will be held in October and November around the state to receive reactions to a proposed state networking plan. This plan has been developed under the guidance of the Network Advisory Council during the past year, by ten committees involving 75 librarians. It is concerned with cooperation among all types of libraries on the state, regional and local levels.

A rough draft of the final Network Advisory Council network plan has been developed this summer. The Network Advisory Council expects to hold hearings this fall on the proposed plan. It would like your attendance and opinions. Prepared statements may be read by persons who have requested to be on the hearing agenda. The statements may then be presented to the committee in written form. After all written statements are heard, the remaining time will be available for discussion and comments from the audience. To be placed on the agenda for any location listed above, call Beverly Jones at 800-522-8116.

Drafts of the final report will be available in early October. To see a copy before the meetings, contact the hearing site libraries, any public library systems, current Network Advisory Council members, or call Beverly Jones. Current members of the Network Advisory Council are Stanley Benson, chairman, Jim Beavers, Ruth Blake, Lee Brawner, Joanne Callard, Lee Graham, Mary Hardin, Jim Heaberly, Rodney Hersberger, Jo Herstand, Linda Hill, Bill Lowry, Jane Northcutt, Norman Nelson and John Walker.

During the past year, the Network Advisory Council has been working on one of its primary charges. The charge was identified by the Oklahoma Department of Libraries Board, when the Network Advisory Council was established. NAC was "to recommend a statewide multi-type interlibrary network, endorsed by library and trustee organizations, the Oklahoma Department of Libraries, the Board of Regents for Higher Education, and the Oklahoma Department of Education." Ten committees have developed various portions of the plan. The project has involved 75 librarians from all types and sizes of libraries. The various parts of the plan developed by these committees have been drawn together during the summer into a single document.

The proposed network plan covers two parts: levels of resource sharing and levels of governance. Each is envisioned as tiered: 1) local level cooperation; 2) regional level cooperation and resource centers; and 3) statewide governance and resource centers. These levels would be supplemented by unique collections in the state. It is not proposed that any new libraries be established, but rather that existing libraries be strengthened, when necessary. The plan is based on participation from all types of libraries.

Editorial

Here it is! The last Oklahoma Librarian in the quarterly format. Beginning with the January/February 1981 issue, it will appear six times per year in the new 8 1/2" by 11" format. News and notices should therefore be more timely. The vice-chairs for each division, roundtable, and committee need to send all relevant news for their agency to me before the January 1, 1981 deadline for it to appear in that first issue. That deadline is absolute and applies to any other articles or other information. Anything received after January 1 will appear in the March/April issue (unless it would be obsolete because of a date in which case it won't appear at all!). The other deadlines are: March 1, May 1, July 1, September 1, and November 1. Because of the reduced number of pages, we may not be able to print as many articles as every issue, but we still hope to print at least one per issue. If you have anything to submit, please send it to me at 1126 Lois, Norman, OK 73071.

Remember the deadline for the logo contest is October 31. The Publications Committee will select the winner. The logo must be built around "Oklahoma Librarian." The prize? — what else but a free membership in the Oklahoma Library Association.

I hope you enjoy and find useful this historic issue. What better place for these excellent articles on preserving library collections? Additional copies of this issue are available from Peggy Augustine for $3.

Andrew Peters

Oklahoma Librarian, October, 1980, Vol. 30, No. 4
both individually in their own locale and as multipurpose library cooperatives at the state level.

Various objectives to improve the sharing of resources are identified. They include improving bibliographic and collection access. The retrospective addition of serials holdings records to the OCLC bibliographic data base through the Oklahoma Union List of Serials project is now underway. It involves between thirty and forty libraries of all types, and will be completed in about 18 months. Some continuing mechanism for updating and additions must be determined, and financed, if necessary.

The retrospective addition of monographic holdings to the OCLC bibliographic network was aided by the Oklahoma Department of Libraries funding. The project included the Metropolitan Library System, the Tulsa City-County Library System and the Department of Libraries collections. Individual libraries have added their own holdings retrospectively, notably Oral Roberts University and Phillips University Seminary. Several libraries are working actively on the older portion of their collection. The OCLC data base forms the basis for both the Oklahoma Union List of Serials and the Oklahoma interlibrary loan network. It is essential that libraries be encouraged and supported to add their retrospective holdings.

A second major concern is to increase the overall availability of materials through cooperative resource development. The report recommends coordination of collection development tied to existing and needed subject specializations.

Any OCLC library, when considering withdrawal of materials, is requested to identify if the material is the only known copy in the state.

Special resources in the state should be identified, and publicized, supplementing the Guide to Humanities Resources in the Southwest, published by the Southwestern Library Association in 1978.

A committee to consider coordination of existing audiovisual service throughout the state is recommended. The largest collections currently are at the Oklahoma Department of Libraries, Oklahoma State University and the State Department of Education.

Overlapping both the bibliographic and the personnel and service concerns is the proposal for four regions. Factors considered in choosing the regions include population and resources. Services expected to be provided by resource libraries in each region include interlibrary loan of materials to libraries within their service area, and on-site reference and research assistance, upon referral by the patron's local library. Such service will include on-line data base searching as well as more traditional forms of reference. The resource libraries are expected to serve as referral centers for their service area. It is presumed these libraries will develop their collections of non-fiction, working cooperatively with each other, to develop carefully crafted cooperative acquisition policies. It is further presumed that each of these libraries will have professional reference librarians on its staff. They should be available to service the collections, and to acquaint librarians in the service area with the opportunities available. They should assist the libraries in the improvement of local information/reference services. Each of the centers should have an in-wants telephone line to receive calls from their service area.

These regions are to be backed up by the libraries of Oklahoma State University, the University of Oklahoma and the University of Oklahoma Health Science Center, designated as Statewide Resource Centers.

Delivery of materials was looked at. Delivery will continue for the present to rely upon the mail as the most speedy and economical method among the four largest libraries. The committee, however, recommended that after the new interlibrary loan protocol settles into an identifiable pattern, this decision be reconsidered.

(continued on page 6)
Both informal and formal multitype library cooperation at the local or multicounty level are encouraged. Such activity is going on in several areas now. The multitype library cooperatives committee outlined an organized method for cooperation at this level, they suggested ideas for formation, made recommendations for a formal agreement, suggested goals and objectives, suggested governance types, and possible sources of funding, and identified potential areas of activity.

The Governance Task Force approached a similar problem from the perspective of a statewide cooperative organization. The final report includes specific by-laws for such an organization. It is to be composed of the four regional multitype library cooperatives in the state. The membership of the organization is expected to determine its own activity.

The Network Advisory Council members must remain aware of interstate and national networking activities and their implications for Oklahoma. Librarians around the state must also be aware of networking developments, both in Oklahoma and elsewhere.

And finally, evaluation of the success of the Network and its components is essential. Hearings will be held on Friday afternoons, from 2:00 to 4:00, at the following locations: Lawton Public Library on October 24th; Central State University Library, Room 211, November 7th (park immediately west of the library in areas not marked for faculty); and in Tulsa, on November 14th, at the Tulsa City-County main library, the Aaronson Auditorium.

Come to the regional hearings and express your interest.

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THE ALA COUNCILOR REPORTS

Roscoe Rouse
Oklahoma Chapter Representative
1980 Annual Conference
New York City

The "Big Apple" as a setting for a professional conference can be, at one and the same time, stimulating and distracting. As the 99th Conference of the American Library Association convened in New York City, June 28-July 4, the theater and Circle Line Tours became evil tempters amid a plethora of committee meetings, general assemblies and debating membership and Council sessions. In some manner or fashion, most conferees succeeded in both attending to the business at hand and reveling in the delectations of old New York during a week of too-warm weather. (Especially "too-warm" in some less-glamorous hotels where air conditioning was not a part of the regular equipment or was turned off around midnight.) Despite the exorbitance of prices for food, transportation, entertainment and hotels, New York is still a delight and a joy to visit.

Council assemblies ran through the entire week and provided conventioneers some of their most substantive fare at the Conference. Missing were some of the brouhahas of the past as we recall floor fights over The Speaker, meeting at the Palmer House and ERA. In fact, if one were to make a tally of the number of social issues as opposed to library professional issues handled in Council at the 1980 Conference, the number would prove to be considerably smaller and the raucus made over them much reduced compared with previous years. There was support shown, to be sure, for ERA, for an open meeting policy, for a boycott of Nestles products, and several other matters having to do more with society and politics than with librarianship. Name-calling in the 1980 Council was down to a minimum.

In a speech at the first Council meeting, Dr. F. James Rutherford, Assistant Secretary of Education, seemed enthusiastic about the place of libraries in American education. He spoke of the need to reinforce the collections in research libraries and said the proposals coming out of the Council this year would prove to be considerably smaller and the raucus made over them much reduced compared with previous years. There was support shown, to be sure, for ERA, for an open meeting policy, for a boycott of Nestles products, and several other matters having to do more with society and politics than with librarianship. Name-calling in the 1980 Council was down to a minimum.

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The ALA Councilor Reports
(Continued from Page 6)

White House Conference on Libraries and Information Service would be given the attention of the Administration. He was pleased to note the “effective linkages” becoming evident between the traditional library and the world of information technology.

The Council referred back to committee for “cleanup” document number 55 (as number 56 revised) which stipulates that “all meetings of the American Library Association and its units are open to all members and to members of the press.” Exempt are those meetings where matters affecting “the privacy of individuals or institutions” are discussed.

The minimum salary issue was perhaps the most ardently debated issue in Council and in membership meetings at the New York Conference. The ALA Office for Library Personnel Resources Advisory Committee had been asked to study the feasibility of recommending a non-binding minimum salary guideline. The committee had made two interim Council reports and published an article on their findings in the May 1980 American Libraries.

The committee gave its support to the minimum salary guideline theory and asked ALA to issue such a statement. Floor debate eventually resulted in a stated figure which might be adopted as a recommended minimum salary for professional librarians, $12,000. It was then that the legal aspect entered the picture and ALA was advised by its legal counsel that we could run afoul of the Sherman Anti-Trust Act. Action on the matter was deferred to the 1981 Midwinter Conference.

Council acted favorably on a policy statement concerned with instruction in the use of libraries. The policy “encourages all libraries to include instruction in the use of libraries as one of the primary goals of service.”

A Council resolution offered commendations to the Phil Donahue Show on television “for presenting the principals in the Island Trees school library censorship case.”

The ERA Task Force reported that the sum of $7,368 had been distributed for work in Missouri, Illinois, Florida and Utah “and is planning funding for Oklahoma.” (Oklahoma is requesting $1,975 but in the fund there remains only $1,500). The Task Force asked Council to extend its existence through 1982 “and to provide an appropriate budget allocation to continue and to expand the work with chapters.”

The report of the Committee on the Status of Women in Librarianship instigated many comments pro and con. Included in the document was a request that ALA “find the funds” to send two members to the University of Washington for training in the Career Development and Assessment Center and that ALA provide free child care services at annual conferences and midwinter meetings “and that financing come out of the conference budget.” The former was referred to OLPR for consideration and the latter to the Executive Director with instructions that he bring a report back to Council at midwinter conference. The committee also requested that Council direct the Committee on Accreditation to revise the 1972 Standards for Accreditation to include affirmative action reports. This item was approved in principle.

A topic given a fair segment of time in both Council and membership meetings was a proposed new dues schedule for personal membership in ALA divisions. A proposal to decrease division dues for students and new members was put forth and received much support in both bodies. Coming at the tail end of the last Council meeting, the hour of adjournment was extended to complete action on the issue. The proposal would have students assessed $5 for a division membership (passed) and new members to receive the same percent discount on division dues as was given on basic dues: $7.50 dues the first year, $10.50 dues the second and third years. The issues were directed to the divisions for action since this would result in a considerable monetary loss to them. Any change in dues will require a bylaws amendment, calling for a vote of the membership.

Oklahoma librarians will want to catch the PLA’s new approach to public library standards, A Planning Process for Public Libraries to be introduced at three preconference workshops in the fall. For Oklahomans, the SWLA meeting in San Antonio, October 27-28 will be our best opportunity to do so.

An announcement was made regarding plans for two “Centennial Trains” to travel from the East Coast to San Francisco for the centennial ALA Conference in 1981. At this point deliberations call for a train on a northern route and one on a southern route. The northern train will originate in New York and layover in Chicago; the southern train will originate in Washington or Atlanta and layover in New Orleans. Activities are scheduled at the stopover points. If you want further information, write to President Peggy Sullivan at ALA Headquarters.

ALA Conferences are never dull affairs and Council meetings always stimulate, provoke and activate ideas and plans which originate within the membership. If you have not had the experience of watching, or participating in, the policy-making process of ALA, by all means sit in on the Council meetings — you will be educated and entertained!
Work has begun on the third edition of the Oklahoma Union List of Serials. Headquartered on the third floor of the OSU Library in Stillwater, the 2-year project is expected to be completed late in March of 1982. Special funding to support the work of the central office is being provided by an LSCA Grant through the Oklahoma Department of Libraries.

The new edition will be based upon the input of approximately 40,000 titles and holdings to OCLC for participating Oklahoma libraries. When the current project is completed, the holdings information will be available online to libraries throughout the United States authorized to use the OCLC serials subsystem. In addition, it is expected that the new edition will be available for sale in the print and microfiche formats for the benefit of interested libraries not on OCLC.

The third edition will contain primarily those serials that are currently received by the participating libraries. In addition, each of the participating libraries may determine which serials not currently received will be reported for inclusion, taking into consideration its resources and the value of the listing to the library community. The inclusion of all serials held by the participating libraries will have to wait for a subsequent edition and additional funding.

A total of 39 libraries have expressed interest in participating in the project which is under way. It will be noted from the alphabetical listing of libraries at the conclusion of this article that 12 special, 22 academic and 5 public libraries are involved. It is interesting to note that 17 of the participating libraries are not on OCLC. In addition to the 39 regular participants, there are 11 libraries (all on OCLC) that do not wish to participate at this time but have indicated a desire to be included in the Union List profile to be developed by OCLC. Such a procedure would afford these libraries access to the Union List data on OCLC and, it is hoped, facilitate their possible full participation at some future time.

Responsibility for the project rests with an Administrative Board composed of representatives from seven of the participating libraries. The Board members are Carolyn Beson, AMOCO Production Company, Tulsa; Ruth Blake, Tulsa City-County Library System; Karen Fite, Oklahoma Department of Libraries; Rod Hersberger, University of Oklahoma; Max Moore, Oral Roberts University; Norman Nelson, Oklahoma State University; and Beverly Sprehe, Metropolitan Library System. In April of this year Sue Saunders was hired by the Board as Serials Librarian/Coordinator for the project. In addition, a Participants Group has been formed which is composed of one representative from each of the libraries involved in the project. Members of the latter group were involved in the review and finalization of detailed operating policies and procedures for the third edition.

The capability of inputting serials records directly to OCLC will not be available to the headquarters office until later this fall, when the Union List Component is expected to be available for the first time. In the meantime, the central office has received an archival tape from AMIGOS which contains records of serials cataloged on OCLC by Oklahoma Libraries prior to March of this year. The Tulsa City-County Library has produced a print-out from the tape which is being used by the central office to facilitate decisions concerning which OCLC bibliographic record will be adopted as the standard by the Union List Project. Once the inputting of data to OCLC gets under way, hopefully not later than November, participating libraries on OCLC will be able to view the progress online.

It is the hope of the Administrative Board that the Union List Project can be continued beyond March of 1982, when the third edition is scheduled to be completed. A central office should continue to operate to keep the list up to date on a continuing basis, to add non-current serial holdings of the participating libraries, and to coordinate the production and sale of future editions in the print and microfiche formats. A "package" approach to funding, which would incorporate financial support from several sources, is under consideration as a means of future support.

The success of the project is dependent upon the cooperation of all the participating libraries. Each library is involved in the time-consuming process of recording up to date holdings information for each serial and forwarding that data to the central office for input to OCLC.

The first and second editions of the Oklahoma Union List have proven to be very useful to a number of libraries for interlibrary loan.
purposes. More than 300 copies of the list have been sold nationwide. The expanded third edition, which will be available online, should prove to be an even more valuable tool for reference purposes.

Oklahoma Libraries Participating in The Union List Third Edition
AMOCO Production Company Research Center Library
Bethany Nazarene College
Cameron University
Central State University
Cities Service Company-ERG Research Library
East Central Oklahoma State University
Lawton Public Library
Metropolitan Library System
Morris Sweet Library ( Ft. Sill )
National Oceanic and Atmospheric Administration
Northeastern Oklahoma State University
Northwestern Oklahoma State University
Nye Library ( Ft. Sill )
Oklahoma Baptist University
Oklahoma Children’s Memorial Hospital
Oklahoma City University
Oklahoma College of Osteopathic Medicine and Surgery
Oklahoma Department of Libraries
Oklahoma Historical Society
Oklahoma State University
Oklahoma State University Technical Institute
Oral Roberts University
Oscar Rose Junior College
Philbrook Art Center
Phillips University Libraries
Pioneer Multi-County Library
Tulsa City-County Library
U.S. Army Corps of Engineers
U.S. FAA-Aeronautical Center Library
U.S. FAA-CAM Library
University of Oklahoma
University of Oklahoma Law Library
University of Oklahoma Health Sciences Center
University of Oklahoma Tulsa Medical College
University of Science and Arts of Oklahoma
University of Tulsa
Western Oklahoma State College

POSITION VACANCY
Title: Librarian (Director), Muskogee Public Library
Duties: Responsible for all aspects of operating the Muskogee Public Library, to provide library services to 90% of Muskogee County, Staff 13 FTE. Budget $180,000. This position reports to the Director, Eastern Oklahoma District Library System, and functions with the advice and direction of the Muskogee Public Library Board of Trustees.
Qualifications: ALA MLS - 2 years appropriate experience required. 6 months successful supervisory experience required. Administrative experience in a library system preferred.
Beginning Salary: $12,968 minimum.
Available: August 11, 1980
Environment: The Muskogee Public Library is a member of the Eastern Oklahoma District Library System and shares a single building with the system’s Service Center. The Library System includes twelve libraries in six counties. Muskogee is a thriving community on the Arkansas River. It is both an agricultural and industrial center for the eastern part of the state. Tulsa is 60 miles north.
Apply: Monty Maxwell, Director, Eastern Oklahoma District Library System, 801 West Okmulgee, Muskogee, Oklahoma 74401. Telephone: 918-683-2846.

people and places

Dr. John Lolley is the new Director of Library Services at Central State University. Formerly the Director of Tarrant County Junior College in Fort Worth, Texas, Dr. Lolley joined CSU July 15. Since then, there have been several reassignments at Central State. Ron Curtis, who had been Automations Librarian, now serves as the Assistant Director for Technical Services; Ciemma McCawley, formerly Acquisitions Librarian, serves as the Assistant Director for Public Services. Also, Ed Hill, formerly Cataloger, now serves as Personnel Director; Lynne Altstatt, formerly Bibliographer, serves as Acquisitions Librarian; John Purdy, formerly Periodicals Coordinator, serves as Serials Librarian and Andrew Peters, formerly Periodicals/Reference Librarian, now serves as Head of the new Reference Department. Two entrance level reference positions and one cataloging position are open for application.

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Colloquium on Preservation

Sponsored by the University Libraries and the School of Library Science of the University of Oklahoma and the Oklahoma Department of Libraries

April 17-19, 1980

MODERATORS:
Sul H. Lee, Dean, University Libraries, The University of Oklahoma
H. Glenn Jordan, Executive Director, Oklahoma Historical Society
Robert L. Allen, Executive Director, Oklahoma Educational Television Authority
Robert L. Clark, Director, Oklahoma Department of Libraries

LECTURERS:
George M. Cunha, Director Emeritus, New England Document Conservation Center
Pamela W. Darling, Head of Preservation, Columbia University Libraries
Lawrence S. Robinson, Preservation Microfilming Officer, The Library of Congress
Sally Buchanan, Conservation Officer, The Stanford University Libraries

COMMENTATORS:
H. Wayne Morgan, George Lynn Cross Research Professor of History, The University of Oklahoma
David R. Farmer, Director of Special Collections, McFarlin Library, The University of Tulsa
Savoie Lottinville, Director Emeritus, The University of Oklahoma Press
Howard P. Lowell, Project Director, Western States Materials Conservation Project
Charles Dollar, Director, Machine-Readable Archives, National Archives and Records
William W. Jernigan, Vice President for Learning Resources and Instruction, Oral Roberts University
Luther Wilson, University of New Mexico
Roy Kelley, Agent, Officer of the Fire Marshal, State of Oklahoma

BANQUET SPEAKER:
F. Wilfrid Lancaster, Professor of Library Science, University of Illinois at Urbana-Champaign
Colloquium on Preservation

Introduction

The physical deterioration of documentary sources is a critical problem. In every library, archive, museum or historical society materials are disintegrating. Their loss, in many instances, cannot be measured in dollars and cents. The cost of their conservation, however, runs high. Thus preservation ultimately becomes an administrative problem.

Shortly after his arrival on campus in the fall of 1978, Sul H. Lee, Dean of the University Libraries, University of Oklahoma, and Robert L. Clark, Director of the Oklahoma Department of Libraries, decided to join forces in presenting a seminar. They chose as the theme this timely topic of preservation and soon after received the support of the University of Oklahoma School of Library Science and its Director, James S. Healey. With the appointment of a representative from each of the three sponsoring bodies to form the nucleus of a Planning Committee, the idea of a colloquium was set in motion.

The Colloquium on Preservation was organized to focus the attention of administrators and others with responsibilities for collections on the needs for preservation, to foster awareness of the magnitude of the problem, to elicit commitment to preservation programs, and to provide information useful for the planning of such programs.

Whatever success the Colloquium enjoyed was due to a year of careful planning by a number of committees and individuals as well as the efforts of all the participants. The Planning Committee especially appreciates the three sponsors who provided the opportunity for the Committee to plan "big" and gave the support needed to carry out this program.

Early in the planning it was concluded that what mattered ultimately was the preservation of ideas, regardless of the medium used to record them. Since society and individuals depend for their very survival on the unbroken transmission of accumulated knowledge which links the distant past to an equally distant future, the program should cover the preservation of a broad range of media, including not only paper but also the various photographic, magnetic, and electronic media.

To this end every effort was made to attract nationally known experts representing various areas in the field of preservation, knowing well that they would contribute not only their knowledge but serve also as a motivating force. Participants attended from 19 states and the District of Columbia, coming from as far away as Massachusetts, California, and Minnesota. In attendance were directors and assistant directors, curators, heads of divisions, and preservation officers, as well as archivists and librarians. Their representation included national, state and university archives; research and academic libraries; the libraries and archives of museums, historical societies and churches, art and architecture institutes. Oklahoma sent representatives from 19 such institutions.

Outstanding lecturers included: George M. Cunha, Director Emeritus of the New England Document Conservation Center, who lectured on "Organizing for Preservation"; Pamela W. Darling, Head of Preservation, Columbia University Libraries, who described ways of doing preservation, with or without money; Lawrence S. Robinson, who addressed the problems of preservation of nonprint materials; and Sally Buchanan, who discussed "Disaster Prevention and Action." Robinson is Preservation Microfilming Officer at the Library of Congress. Buchanan is Conservation Officer at the Stanford University Libraries.

The Colloquium on Preservation seemed an ideal place to emphasize that although more sophisticated methods of storage and retrieval of information are being developed, it will still be necessary to preserve the messages being transmitted by the new media.

Thus, F. Wilfrid Lancaster, a noted systems analyst from the University of Illinois, was invited to deliver the banquet address on libraries of the future to bring to the forefront consideration of this newest form of responsibility facing the preservationist. His projection into the paperless world of the twenty-first century evoked uncomfortable feelings and negative responses from many participants, and yet it cannot be denied that the automated medium of information dissemination is increasingly becoming a vital resource in the library world today. It can offer an abundance of information in a matter of minutes. Besides speed, it presents flexibility in access to information via the nearest CRT, at the library, at the office, or at home by the patio. As more and more vital primary resources are published and made available only by way of automated systems, the preservation of information provided by the electronic medium becomes equally important to the conservationist, as are paper and other nonprint systems. It is fortunate for the electronic era that the preservation movement is under way, for it will provide the opportunity for programs of preservation to be built into the systems. While some believe that the electronic medium will render the work of the preservationist superfluous, others believe, perhaps more realistically, that his responsibility has merely been extended.

Equally outstanding were the commentators who added credence and strength to the lectures, reflecting their own years of study and experience in the field of preservation. In his response to the paper of Pamela Darling, Savoie Lottinville, Director Emeritus of the University of Oklahoma Press, made a simple proposal which, if adopted, could dramatically improve the preservation status of libraries in a relatively short time.

Said Lottinville:

For more than thirty years, I have been impressed with the fact that libraries have been called upon to play catch-up football, because of the errors and omissions of others... The wrong-headed conditions of their manufacture for more than a century have made books self-destructing. It takes no considerable command of chemistry to realize why. From the advent of pulp papers, made from wood fibers, beginning in the last century, the techniques of manufacture have laid heavy emphasis on chemical bleaches, notably chlorine. Residual chlorine in the finished paper, joined with changing levels of moisture in the sheet, gives us a mild but destructive acid. Alum rosin sizing applied to the paper to give it printing qualities produces also an acid hydrolysis which destroys the acetal linkages between the glucose sub-units of cellulose...

As a consequence, the book papers you are trying to pre-
serve have a pH on the Sørensen Scale of acidity between 4 and 5. In spite of your best efforts at catch-up football, the best you can expect is a longevity of fifty years or less in the book so produced. The answer does not lie, however, with all-rag papers. The answer lies to a considerable extent with the use of alkaline methods in the production of modern pulp papers. The latter are represented by some thousands of books produced by the University of Oklahoma Press between 1959 and 1976. They have, we believe, a life expectancy of at least three hundred years. It is my belief that it doesn't much matter how they are shelved, for they are alkaline buffered.

The alkaline methods I cite were inaugurated by some paper mills as long ago as twenty-five years, but they are even today the exception rather than the rule. Inertia has kept many mills from converting their equipment. And I have to admit that experience has shown that it takes about a year to rid a paper-making machine of its acid sludges in a change-over to alkaline methods.

Thus, a partial technical solution to your problem has already been delivered. But its continuing implementation is largely up to you. In the twenty years since acid-free book papers were developed, more than half a million titles have been added to our catalogues in this country alone. A large percentage of them will not survive the coming two decades. For these reasons, I have felt for some time that the books you buy should show the pH of the paper used in them, and it should not fall below 6.5, but better, 8.5. There is presently no difference in cost.

Admitting that copyright pages are now overburdened, I would still like to suggest that the pH data for the books you buy should appear there. Obviously, the way to have it placed there is to achieve a unified stance through the American Library Association. This, I must add, is only a beginning. The reason is that most of our technical data on papers, good though it may be, is much out of date. We need now a fully modern assault on the problems of paper chemistry, utilizing the best devices we possess, including mass spectroscopy, for the analytical work we do.

The Planning Committee and the sponsoring bodies heartily support this suggestion made by Savoie Lottinville and ask you to accept responsibility with us for implementing this proposal to include the pH data on the copyright page. By its inclusion, the quality of paper in books would steadily improve, librarians would be able to purchase books with full knowledge of their durability, and preservationists would know if and when precautionary measures might be necessary.

The Planning Committee is particularly grateful to the Oklahoma Librarian for sharing in the desire to present this timely information without delay. We regret that the eight commentaries cannot be included here also.

Marcia M. Goodman
Chair, Planning Committee
The University of Oklahoma Libraries

Marietta Malzer
The Oklahoma Department of Libraries

Bernice McKibben
Chair, Planning Committee
The University of Oklahoma

George Martin Cunha, Director Emeritus
New England Document Conservation Center

ORGANIZING FOR CONSERVATION
Setting Up a Preservation Program

The Problem

What I have been asked to discuss for one hour this morning could be the material for a semester of lectures in a course on conservation in a college of library science. In the time available I will comment briefly on the subjects I have covered in considerable detail in the paper I submitted to the program committee and hope it will be published along with those of the other speakers to provide a challenge and incentive for professional librarians.

This is a most controversial subject on which there is agreement in my profession and in yours on only one thing — something has to be done. I have seen many changes in the past twenty years in the attitude of librarians towards conservation and amongst those in my profession in regard to the role of the librarians vs. the conservator. Twenty years ago all too many librarians were unaware of or ignored the alarming deterioration of books on their shelves. Then there were still some of my associates who felt that somehow we alone could handle the problem if we could get into libraries and take charge. This meeting today is evidence that all that has changed. Ten years ago librarians (somewhat reluctantly perhaps) began to accept conservation as one of their management problems and we began to realize that the dimensions of the problem are such that conservators by themselves could never begin to do what has to be done in libraries.

In 1970 Frazer Poole, then Assistant Director for Preservation at the Library of Congress, reported that six million of the seventeen million books there were too brittle to use and that even to keep 10% of those six million in the national collection, it would cost eighteen million dollars and take thirty years to restore that 10% to usable condition. Poole predicted at that time that 97% of the
nonfiction published between 1900 and 1939 would be unusable by 1999. Jim Henderson, then Head of the Research Library, New York Public Library, made similar comments about his collections. These observations apply to every library in this country. I can illustrate this situation by the curve (figure #1) which shows how librarians today have been overtaken by events and why it is necessary for positive action on your part now.

In 1875 Justin Winsor at the Boston Public Library and first president of the American Library Association was acutely aware of the ever-increasing deterioration of book paper and he wrote frequently on the subject as did Harry Lydenburg at the New York Public Library in 1925. Then theirs were voices crying in the wilderness, but today there is a flood of literature on the subject and a desire on the part of most librarians to know more. The references I cite at the end of this paper, the majority by librarians, are only a small part of what is being written. I think that these dissertations, and many others like them, are particularly important because they were written keeping conservation in true perspective relative to all of the other responsibilities that are part of your daily work.

One of the principle reasons for your present dire situation is the never-ending attempts by publishers to reduce the costs of producing books. The result has been paper that chemically self-destructs in a few years. Short cuts in book manufacturing methods and compromises in standards of workmanship result in volumes that fall apart after the first few times they are opened. The unhappy fact is that it is you who have to work with these books to keep them constantly available for users today and to insure their availability for the generations to come.

For years there has been a great deal of talk about international and national programs for library conservation. With a few exceptions, it ended there. At an international meeting in Florence in 1970, the participants had great hopes for the establishment in Florence of an international center to which librarians and conservators in all countries could turn to for help in all aspects of conservation. Nothing came of that. The next year there was a joint meeting in Copenhagen of representatives of the International Federation of Library Associations and the International Council on Archives to discuss the physical protection of books and documents. Their conclusions and recommendations had merit, but subsequent attempts to follow up have failed. Today IFLA's Committee on Conservation is still active, but I sometimes think they have their heads in the clouds.

NEW ENGLAND DOCUMENT CONSERVATION CENTER
800 Massachusetts Avenue
North Andover, Massachusetts 01845

Deterioration of Library and Archival Materials

This curve is not mathematically plotted nor is it a depiction of actual data. However it is illustrative of what is happening with the passage of time and emphasizes the importance of the necessity now of arresting the decay of the records of our heritage.

This diagram illustrates the fact that in an average collection more damage is taking place in a five year span between 1970-1975 than occurred in an entire century (1700-1800).

Figure #1
At both the Florence and Copenhagen meetings the consensus was:

(a) Cooperative Conservation is the key to the solution
(b) Teaching and training is a major requirement at the beginning
(c) Conservation is expensive
(d) Centralization and coordination will help contain the costs

Those observations are the assumptions on which any library conservation program must be based.

At this time cooperative regional and national preservation programs are under consideration by the Association of Research Libraries, American Institute for Conservation, the National Conservation Advisory Council, and the Library of Congress (National Library Conservation Program). The Research Library Group (Harvard, Yale, Columbia and New York Public Library) is in effect a cooperative conservation effort. The 1978 Institute on the Development and Administration of Programs for the Preservation of Library Materials at Columbia University's School of Library Service was a landmark. Part of the immediate fallout was the establishment of the important new publication Conservation Administration News (CAN), which is published quarterly for librarians by librarians.

The Columbia program of graduate education in conservation administration for librarians that will probably accept its first class in September 1981 is another result of the 1978 summer program at Columbia. There are regular courses in conservation administration at the University of Rhode Island's Graduate Library School, the University of Illinois at Chicago, University of South Carolina's College of Librarianship, and at other graduate level educational institutions around the country.

The scientific community's impressive research into the causes for book deterioration, the nature of materials and the effects of the environment on them is not being fully utilized, but I sometimes think that the research underway at some institutions is often unrealistic with little chance of practical application of the results of those studies. Preservation research is not a thing apart that can be pursued in an ivory tower. There must be constant communication between the users (you), professional conservators and these scientists (see figure #2). Are some of the problems being researched to infinity?

Two eminently distinguished people have expressed themselves well in this matter. Peter Waters at the 1970 international meeting in Florence stated: "We must guard against the complete control or conservation programs by scientists and restorers leaving the scholars more frustrated..."

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**THE TRIPARTITE CONCEPT OF CONSERVATION**

**Administration**

- Decision making based on all the considerations involved in addition to the conservation factors.
- Establish staff policies
- Plan and provide funds for conservation program
- Emergency plans
- Support regional cooperative conservation
- Advocate the teaching of conservation in schools and colleges
- Provide learning opportunities for staff
- Cooperate with scientists and professional conservators
- Support professional groups

**Science**

- Study:
  1. Causes for deterioration
  2. Effect of the environment on materials
  3. Chemical and physical characteristics of materials
- Evaluate traditional procedures
- Develop new procedures for treatment of materials and control of the environment

---

**Professional Conservation**

- Provide advice and assistance in:
  1. Environment control
  2. On the site treatments of materials
- Teaching for institution staffs
- Training for technicians
- Establish standards
- Conduct surveys and inspections
- Conduct seminars and workshops
- Perform sophisticated repairs
- Disaster assistance

Figure #2

Oklahoma Librarian, October, 1980, Vol. 30, No. 4
than ever." Pamela Darling, writing in a special issue of Library Journal in 1977 said in effect—"We cannot wait until professional conservators know all there is about everything (before taking action) while our books are quietly rotting on their shelves."

With that as a brief background, I therefore say to you — if ever we are going to resolve this problem of the awesome deterioration of books, it will be when the library profession takes charge. Regardless of the advances in computerized data recovery and the other new and exciting things you are doing, it is the books in codex form standing by the millions on the shelves of your libraries that you must preserve in their present form, or the generations to come. In the great majority of libraries today — even at some of the largest and most affluent institutions — there are still no well-organized conservation programs. I will agree, however, that there is in a great majority of libraries an awareness and desire by librarians to do something about conservation "if they only knew how to go about it."

That is what is so distressing because 80% of what has to be done in any library can and should be done in-house by the library staffs. For the rest of this period I am going to confine myself to that 80%. I do not minimize the importance of the 20% of the total conservation effort that can only be done by professional conservators because they have their 20% pretty much under control.

Referring back to figure #2, we can see that the 80% of conservation that can be done in-house so to speak is management; decision making; communication and cooperation; funding and planning; in-house education programs; etc. When that is accepted the other things, such as improvements in climate control; control of light; better storage provisions; identification and treatment of the more simply damaged items fall into place.

Administration and Economics

The fact that conservation is expensive is only one of the reasons for librarians taking charge. Conservation is a lot less expensive if that which has to be done and can be done "in-house" is done under your supervision by your own employees. That means organizing for conservation within your own establishments. Ample guidance is available in the literature.

I can think of no better way to start than by availing yourself of the experience of James Henderson at the Research Libraries, New York Public Library (10) and patterning your own program on the excellent guidance offered by Caroline Clark Morrow (12) and the major aims offered for conservation by Robert Patterson (13). Once organized in a modest way or on a more ambitious scale with a conservation advisory committee and/or a conservation coordinator; with conservation policies for your particular library; and utilizing as many as possible of the training opportunities (seminars, workshops, conservation classes in continuing education programs etc.); and with the conservation committee well along on the development of emergency plans, you can embark on Phase II of your in-house program.

This should start with a survey of your premises and the contents therein. If this can be done by a professional conservator, that is fine. If not, there is guidance for doing that yourself (7). These surveys will let you know where you stand in regard to climate control, control of light, suitability of storage areas and facilities, the physical condition of the books, documents, maps and atlases, broadsides, prints and pictures, and works of art on paper for which you are responsible. Of equal importance is the fact that from these surveys you can determine what remedial measures and treatment can be done on the premises and what should only be done by professionals. You can establish priorities for each and what is of utmost importance from these surveys, you can get an idea of what all this might cost over the next ten or even twenty years.

When your survey has given you an idea of where you stand and what must be done, then you can start on Phase III — improvements to the physical plant and repair and restoration. Without resorting to new building construction or major reconstruction to existing facilities, you can make drastic improvements in climate control and control of damaging light at relatively modest (?) costs. Again there is a wealth of literature on this, but none is better than that put together by Howard Winger and Richard Smith after the University of Chicago Graduate Library School's conference in 1969 (18).

In regard to repair and restoration, professional conservators such as those at the New England Document Conservation Center and the other reputable service institutions and private practitioners listed in the directories of the Guild of Book Workers and the American Institute for Conservation can salvage almost any item regardless of the degree of damage, if the importance of the object warrants such treatment and if there is money to pay for it.

As stated previously, a great deal of the repair work that has to be done in libraries could be done in these libraries if modest work space is made available. Several specialists have written good "hands-on" instructions for the cleaning and preservation of bindings, particularly Carolyn Horton
The New England Document Conservation Center distributes leaflets on cleaning, deacidification, mending and reinforcing by encapsulation or with nylon webbing at its preservation workshops. They can be obtained from NEDCC for a modest fee.

Where the money for preservation in your establishment will come from only you can tell. Some must be made available by readjustment of your annual budgets; private benefactors have been known to support preservation programs when they are acquainted with this aspect of your work. Federal and state agencies and private foundations look with favor on preservation projects particularly when "seed money" is requested, but I seriously doubt if any agency, public or private, would continually finance a conservation program in your library. That is why I am convinced that the ultimate solution to the conservation of library materials is a regional cooperative conservation effort to spread the cost and make maximum use of funds, scarce technically trained personnel, and expensive tools and equipment.

**Education and Training**

The American Institute for Conservation, the International Institute for Conservation and related professional groups are acutely aware of the need for more and better trained professional conservators and conservation technicians and are working aggressively to meet that demand. They will handle it well. For those more interested in that problem see Paul Banks (1).

An equally important requirement is more training opportunities for conservation administrators — librarians well qualified in conservation management and administration. The program being developed at Columbia is a major step in that direction. If only there could be more. The graduates of the Columbia program will be in great demand and far too few will meet the need.

There will be for a long time to come a requirement for training opportunities in conservation management at the continuing education level, and in regional state and local library organizations such as those that have been going on in New England, New York and New Jersey sponsored by State Library Associations; funded to a large extent by the National Historical Publications and Records Commission and conducted by the New England Document Conservation Center. This is another area where cooperation between supporting organizations will pay off. This meeting, a joint effort by the University of Oklahoma and the Oklahoma Department of Libraries, is an excellent example of what can be done. I sincerely hope that it will be only the first of a series of seminars, workshops and colloquia on library conservation in this part of the country. I will caution you, however, that education and training in conservation management for libraries must include collaboration with professional conservators in the presentation of these opportunities and in the programs developing from them.

**Preservation Criteria**

I have been asked to comment on what to preserve. I do not know — those are management decisions requiring consideration of many factors in addition to the degree of deterioration such as intellectual content, rarity, value, importance to research, availability of the same information elsewhere, and the repair and restoration alternatives open to you. Once again, I refer you to Henderson (10) and Morrow (12). Morrow is particularly good on priorities. I do suggest, however, that in subsequent seminars and workshops for librarians you provide learning opportunities for the identification of various types and grades of paper; the recognition of different kinds of book and paper deterioration and how to judge degrees of degradation; how to test for acid contamination in still reasonably good looking books and documents; how to recognize the different types of bindings on library shelves (publishers', trade, school, hand bindings, restoration bindings, etc.) and how each will stand up to the amount of use and abuse books get from various users.

Your seminars and workshops should also include presentations by librarians, microform specialists, binders and restorers on the use of reprints and facsimiles; microforms and hard copy from the same; commercial binding, hand binding and restoration binding; boxing; and even withdrawal from use of damaged books vs. repair and restoration.

It has been my experience that some librarians rely on periodic stack checks by department personnel to identify volumes needing attention. Others depend on staff and users bringing damage to their attention. Libraries having a conservation committee and/or a conservation administrator sometimes conduct surveys of particular collections or categories of books to spot those needing treatment.
Fund Raising

Fund raising is an area of specialization that is best left to specialists. The competition is great, the funds available for grants limited, and the money goes to those who can best present their cases. I have seen all too many worthwhile projects fail to gain grant support because they were not prepared with the expertise and finesse that is applied by specialists in fund raising.

Again it appears to me, and I am pleased to know, that funding agencies are sympathetic to requests for assistance for teaching training programs and for cooperative conservation efforts. The generous support by the National Historical Publications and Records Commission for such programs in New England is only one example. The Foundation Directory should be your basic reference for sources of possible assistance, particularly on the regional state or local level in addition to the well-known federal agencies and major private foundations operating on a national level.

It seems paradoxical to me that so much of the big agency money goes to support programs in the larger and more affluent institutions that are so much better off financially than so many others. I do not believe that the big agencies particularly indulge these lucky establishments. Rather it is because these recipients work harder at it, do their homework better and often have full time fund raisers on their staffs who turn out a better product (grant request). If I have any criticism of fund raising, it is that too much money seems to be going into projects for feasibility studies and evaluations of the need for conservation (reinventing the wheel) — money that to me could be very well spent on teaching and training, establishing cooperative conservation efforts and perhaps even getting some preservation work done at the grassroots’ level.

Support from Regional Centers

The support that regional centers can provide you is first and foremost to be a clearing-house for conservation, a place to turn to for answers to the multitude of questions you now have and the multitudes more that will be generated as you progress with your programs. If a regional center were never more than that, its existence would be justified. Regional centers are the logical intermediary between you and the scientific community and between the scientific community and professional conservators to provide a constant flow of reliable (repeat — reliable) information from them to you.

Regional centers can provide the lecturers and instructors for the seminars and workshops that will be such an important part of your preservation efforts in the years to come. At regional conservation centers when they become more than a clearing-house for conservation (i.e. provide workshop facilities staffed by conservators and conservation technicians) it will be possible for people from your establishments to get the training in the simple cleaning, deacidification, mending and reinforcing techniques for black and white flat paper and simple book repairs that are the 80% of the work that has to be done in your libraries and which are legitimate “in-house” preservation measures. When I was directing the New England Document Conservation Center, that was my policy. Today NEDCC no longer provides those opportunities because they are not income producing. I consider that to be a great mistake.

Regional centers can provide visiting professors for courses in conservation and conservation administration at schools of library science in the colleges and universities that have such graduate programs.

Regional centers can provide conservators to do the surveys of library buildings and their collections that are such an important early step in any conservation program.

Regional conservation centers will, of course, have the necessary skills and sophisticated and expensive machinery and equipment to do that 20% of the repair and restoration of your collections that never should be attempted in-house unless you have a professional conservator on your staff.

Regional conservation centers can provide a microtome service and processing facility for “preservation” microfilming which is a thing apart from the commercial services available, (including so-called “archival” microfilming) and in some instances archival storage facilities without which even the most expertly filmed and processed film will not survive for the generations to come.

Conclusions

To summarize — in this great country of ours with its tremendous scientific, technical, educational and cultural resources, it is not possible for you to buy the solutions for your conservation problems “off the shelf” even if you have the money to do so. If the problem of the awesome deterioration of books is ever to be resolved, it will be because you accept it as your responsibility and do something about it using we conservators as expert consultants.
The National Conservation Advisory Council, the American Institute for Conservation, Guild of Book Workers, the Library of Congress, National Archives and others are all working toward the same end with you, but with the exception perhaps of the Library of Congress, they usually do not see the problem from your point of view. The L/C is so deeply involved in caring for its own collections that they have all too little time to help in your regional, local and individual programs. People in your profession are already making contributions of the utmost significance to the literature on conservation (see how many of the authors in the bibliography herein are librarians).

There is a need for a new category of librarian — a person who in addition to his graduate education in library science is also educated and trained in conservation management. Those are the persons who will be most effective in establishing the “in-house” preventive and restoration programs that will insure that your collections are available for use by the generations to come. Those persons will be the ones to manage your part in the tripartite concept of conservation.

However, you cannot wait until the happy day when librarian/conservation administrators are being turned out by the colleges of library science in sufficient numbers to meet your needs. You must act now, doing the best you can with the not-insignificant resources available to you at this time, applying your God-given intelligence and common sense to this aspect of your work as you so well handle the many other matters that are a part of your daily routine.

BIBLIOGRAPHY

"DOING" PRESERVATION, WITH OR WITHOUT MONEY
A Lecture on Carrying on a Preservation Program

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Preservation has become a very hot topic in the last few years. At the end of 1976, speaking to the Planning Conference for a National Preservation Program, the President of the Council on Library Resources observed that a major preservation problem was the fact that so few people realized there was a problem. Putting it rather neatly, Jim Haas declared: "We have here a matter of great public concern, but we don't have a concerned public." (Conference Report, LIBRARY JOURNAL, February 15, 1977, 102:449.)

Three and a half years later, we are well on the way to having a concerned public. Not only has the library profession become aware of the frightful things going on in our stacks — witness our all being here today — but the topic has turned up in the general press with increasing frequency. Articles have appeared in many major newspapers, the wire services have picked up several items, the "Talk of the Town" in the New Yorker has begun to nag at the literary community about it, and various industry trade journals — chemical, insurance and so on — have also taken note.

Disasters such as the Stanford flood, about which you'll be hearing from Sally Buchanan tomorrow, have made good copy and helped spark general interest; but attention has also been focused on the quiet but deadly deterioration that is taking place day after day. Still my all time favorite is an article from the National Enquirer — which my sister's mother-in-law spotted in a Seattle supermarket — with a screaming headline "Millions of books disintegrating in nation's libraries!" (February 14, 1978) It would probably be fair to say that by this time the need for preservation programs is widely recognized.

With the "why" now relatively easy to document, we face the next hurdle — what, how, who? At almost any gathering of library administrators you can hear people bemoaning the lack of preservation programs in their libraries, the lack of knowledgeable people, the lack of regional resources, the lack of a national program. Library schools are beginning to feel anxious if they don't offer a preservation course. Workshops are over-subscribed by people rather desperately trying to find out what they ought to be doing. And budget officers are shuddering in anticipation of the staggering costs that will surely be involved in "doing it".

Up to a certain point, anxiety can be a useful weapon in the battle to preserve our collections. It can shake us out of our routines, compel us to reconsider our priorities, soften up our funding sources. But in some places it has produced a useless state of frozen panic — throwing up our hands in horror at the apparently overwhelming magnitude of the task, sure that we don't even know where to begin and the library had better find somebody with some "expertise" to take care of preservation. When God called Moses to lead the people to the Promised Land, he was quick to say, "But I am nobody. How can I go to the king and bring the Israelites out of Egypt?" (Exodus 3:11) It was a nice try, but it didn't get him out of the job, any more than self-perceived inadequacy will relieve us of the responsibility to rescue the materials entrusted to our care. "Go down, Moses" . . . "Into the stacks, librarians" . . .

Does that seem a bit frightening? (If you say no, you're probably fibbing.) To control the fear, let me try an experiment that may help to calculate how far we have to travel to the "promised land" of an effective preservation program:

How many of you have an active preservation program in your library? Hands up . . .

Now, you have your hands fidgeting in your laps, get ready:

How many routinely bind serials and paperbacks?
How many rebind worn or ragged volumes?
How many purchase replacements for lost or damaged items?
How many purchase microform files for newspapers and serials?
How many have an in-house mending or repair operation in some back corner?
How many train new pages in shelving procedures?
How many use book covers or book jacket protectors?
How many prohibit food, drink or cigarettes in stacks or reading areas?
How many have air-conditioning in book storage areas?
If you raised your hand once, raise it again... Every one of you has an active preservation program. It's probably not comprehensive, it may not even be very good. But your library is already "doing" preservation, whether you call it that or not.

So why are we here?

We are here, I suppose, because we know that what we have been doing is not enough, that our approach to caring for library materials has been shaped by a perfunctory "mark it and park it" attitude that mistakenly assumed "it" was a stable, sturdy object. In our quest for "professional" status we have, through the years, played up the intellectual aspects of the organization of materials and the provision of in-depth reference service, believing that the mundane, practical aspects of physical care were beneath our professional dignity - after all, we're not custodians or cleaning ladies. Unfortunately, tragically, the objects which we have so thoughtfully selected and catalogued and relied upon as reference sources are slipping away because we have failed to give the same thoughtfulness to their physical well-being.

The single most important factor in the survival of library materials is the conditions under which they are kept and housed. Yet the responsibility for housekeeping has traditionally been relegated to pages and the maintenance crew. This we must change. And the first step in this change is to learn to walk through our libraries with our eyes open. Visualize your own collection. Unless yours is a brand new library with nothing but brand new books in it, I wager that a large proportion of your collection is dirty and untidy. We ignore conditions in our libraries that we wouldn't tolerate in our homes. We must learn to see them, in order to correct them.

What should we look for? Consider first the basic environment. Like people, books and other library materials are made of organic compounds which can react to physical and chemical agents in their surroundings. Virtually all such reactions, by definition, are undesirable, since we want our materials to remain in their original state. The major catalysts for change include temperature, humidity, light and airborne contaminants.

Temperature, as a form of energy itself, acts to speed up or retard chemical reactions as it rises or falls. All other things being equal, materials keep longer in cool storage conditions — a fact startling not for its novelty (we all have refrigerators) but for the ease with which we forget it. Chemical reactions double their rate with every 10 degree increase in temperature, from which it follows that the rate of deterioration can be cut in half, and the life expectancy doubled, by a decrease of 10 degrees in storage temperature. The implications for library buildings are pretty obvious; and let me hasten to assure you that libraries are entitled to claim exemption from the summer cooling limitations set by the government. And the higher energy costs incurred by cooling in the summer can be offset by lower energy costs for heating in the winter. A practical goal is 65° year round — and that means all day and night, including Sundays and holidays.

Humidity is equally important, and its effects are directly related to temperature. Water molecules, as you know, are constantly present in the air, and their concentration is a function of temperature. I'm a bit hazy on exactly how this works, but in most places it gets wetter as it gets hotter. The significance of this for us is that most library materials, especially paper, are hygroscopic, which means that they can absorb moisture and give it off again to remain in equilibrium with the air surrounding them. If conditions are too dry, fibers become brittle and may crack. If it gets too wet, they swell and warp. Worse yet, excess moisture may combine with impurities in the paper or pollutants in the air to create destructive acids which eat at the basic structure; and warm moist conditions can lead to mold formation and create incubators for bacterial and insect life. Cycling of temperature and humidity, such as would occur if air conditioning were used only during working hours, causes moisture to move in and out of paper rapidly, which may cause a permanent weakening of the physical bonds holding it together. The goal is to maintain a steady relative humidity of 50%, give or take five percentage points, for book materials year round; slightly lower for film or tape-based material.

Light is another major enemy. It is like heat a form of energy, but its effects are more direct and deadly. While the processes are complex and not yet fully understood — at least by me — light waves actually attack the molecular bonds within paper or cloth, changing both color and basic structure. The most damaging wavelengths are those in the ultraviolet range — and both sunlight and fluorescent tubes are heavy emitters of UV radiation. How are your reading areas lit? You can get UV filtering materials for windows and fluorescent lights, and you should take special care with materials on exhibit. We are fortunate, at least, that when books are not being read they are usually closed, and light does not penetrate the covers.

Airborne contaminants are the other major danger presented by the basic environment. These may be gaseous or particulate. Sulfuric compounds from industrial and automobile exhausts can combine with moisture to create acids. Grit, grime, greasy coal smoke and just plain dust can stain
and abrade. A combined program of air filtration and regular cleaning is the best preventive measure. (For more detail, see Paul Banks, "Environmental Standards for Storage of Books and Manuscripts", LIBRARY JOURNAL, February 1, 1974; and "Environmental Protection of Books and Related Materials", PRESERVATION LEAFLET #2, Washington, D.C., Library of Congress, February 1975.)

The costs associated with providing clean cool air for our collections have tended to appall us into inaction, but I believe this is mostly a problem of attitude. We don't question whether we should go to the expense of building a roof or walls, or whether we should put in a heating system — that much protection from the elements we take for granted. We must learn now to extend our understanding of what is required to protect against these more subtle environmental elements.

Lest anyone is thinking that the environment is not all that important because modern paper is so bad it will deteriorate anyway, listen to what happened during the Bicentennial: Carolyn Horton, the great conservator, was called in to advise the town fathers in Momsey, New York, on the preservation of the contents of a time capsule from 1876. Mrs. Horton carefully examined everything, including a number of documents and newspapers. She tested the papers and found them to be full of ground wood and alum, and highly acidic. From everything we know about old newspapers, they should have been yellow crumbs after a hundred years — yet they were as white and flexible as this morning's paper. They had been sealed in a dark, almost airless container, and buried deep enough that the temperature had been constantly low. Storage conditions, in fact, had been ideal and there had been no deterioration. Obviously, we can't bury our collections in time capsules; but the investment in environmental controls will bring a pay-off year after year in costs we won't face for replacement or restoration.

A different kind of storage factor is the way books are shelved and handled. There are no mysteries here, only common sense — but to walk through most large stacks could leave one thinking librarians are all senseless! Average books should be stored upright on clean smooth shelves so constructed as to promote air circulation. (As an aside, let me say that closed cases such as are sometimes found in rare book collections can provide better protection, particularly from dust and occasional violent fluctuations in temperature or humidity — but only if the basic conditions within the case can be controlled. A radiator underneath or steam pipes in the back wall may turn your protective case into an artificial aging oven. For most situations, free air flow is the more practicable approach.)

Book ends are a must; to keep all volumes upright and firmly supported on each side. A book that leans on a shelf for a few weeks will develop a permanent deformity of the spine, and the stresses set up within the binding may actually tear it apart while it sits on the shelf. Gravity is a powerful force, at least for earthbound collections.

So powerful is it, in fact, that over-sized volumes, either very tall or very thick — should be shelved horizontally, or their insides are likely to fall out. I visited a prestigious Eastern library a few years ago and saw the new map room, in which a large collection of atlases had just been arranged on special tall shelving units. From the front it looked terrific — neat and tidy, with spines all perpendicular to the shelf. But the back of those single-sided ranges was dismaying: half the pages had torn loose at the top and were hanging out, fraying, sagging, gathering dust. Don't let this happen to your collection. Just because publishers send out objects four inches thick or twenty inches tall between two covers, don't be fooled into thinking they're books.

The shelving process is an important part of storage conditions. As shelves fill up there is always the temptation to try to squeeze in just one more to avoid having to shift a section. This can be very damaging. Smaller volumes may be jammed to the back, horizontal pressure may crack a thick spine, covers are abraded, books can't be removed without tearing at the headcap, the whole row may even bulge out and send volumes crashing to the floor. Staff members responsible for shelving new volumes should be given firm instructions about the need to shift — it seems like a dreadful nuisance, but the consequences of not shifting are even more dreadful.

Whenever staffing arrangements allow, the responsibility for shelf conditions should be assigned to a particular individual; in large stack areas, sub-sections should be individually assigned. The responsible person should have authority to shift, to order book ends, to help plan for new shelving as needed, and should be held accountable for the appearance of his or her area.

There's a bit of psychology that's helpful: it's a natural human tendency to leave things as they were or more so. If the general appearance of the shelves is sloppy, overcrowded, rows of books leaning every which way, people will be pretty casual about the way they remove or replace volumes. But if the collection is neat and orderly, they will be more careful, and may even straighten one toppled row if it's in marked contrast to all the rest. The trick is to give enough time to shelf arrangement to create an over-all impression of straight lines and right angles, so that everyone using the collection will join in the maintenance effort.
It's a good idea, also, to build quick dusting into the shelving routines. A lamb's wool or feather duster in the book return or sorting area can prevent carrying dust back to the shelves. And snivelers equipped with a duster can remove some from shelves before replacing books. It's not much help, though, if dust is just brushed from one shelf to the next. Cloths or dusters sprayed with Endust, or One-Wipe treated cloths, will pick up the dust instead of spreading it around. By implication, regular cleaning in stack areas is also essential to avoid dust and dirt build up — especially in older collections where crumbling paper adds to the general debris. (See excellent illustrated directions for cleaning books, in the first chapter of Carolyn Horton, CLEANING & PRESERVING BINDINGS AND RELATED MATERIALS, 2d ed., Chicago, American Library Association, 1969; LTP Publication #16.)

Book drops, so convenient for getting things back at all hours, can create hideous preservation problems. The very name should make us shudder! I don't suppose we'll ever be able to do without them entirely, but we do need to pay more attention to their design. Too many consist of no more than a slot in the side or top of a counter with a box underneath. I don't need to tell you what happens in the box. Inclined planes and spring-loaded trays help somewhat. I wish some mechanical wizard would develop a gravity or spring-powered device that would gently rotate each 'dropped' book and deposit it on a shelf or neat stack. Till we have that, at least follow the practice of locking the book drops when the library is open so people will have to hand books in at the circulation desk.

Much more might be said about shelving and handling, but once you're in the habit of seeing what goes on and applying your own common sense you'll be able to figure it out as easily as I can tell you.

Let me turn now to another major preservation activity — binding. Everyone who's had the dubious distinction of being in charge of binding knows what a wretched business it can be. In many places, binding is still the responsibility of the serials department — most of whose members are understandably more interested in the bibliographic than the physical aspects of maintaining a collection. In the good old days before paperbacks we rarely had to think about binding monographs. Also in the good old days, printed materials had respectable margins, and book papers were flexible enough to lie flat with all the text visible after binding. Not so today, in too many instances.

I can't give you a complete course on the physics and chemistry of binding, but let me try for a quick outline of the major features that we, as librarians, need to understand in order to work effectively with our binders.

The heart of a binding is the way the pages are fastened together, and there are several major alternatives. The oldest is generally referred to as "sewing through the fold", in which groups of folded double pages, called signatures, having stitching down the center fold, the thread usually looped around several tapes or cords set crosswise to the fold which serve to hold all the signatures together and anchor them to the cover. This method produces volumes that open easily and lie flat, no text lost in the gutter margin, and it does the least damage to the paper. There are three potential drawbacks: it does not produce a very strong binding so is not well suited to heavy or heavily-used volumes; it is time-consuming and therefore relatively expensive; and most books today do not have signatures so there are no folds to sew through. Nevertheless, from a preservation point of view, sewing through the fold is the "preferred" method when it can be done, particularly for books possessing intrinsic value as objects.

For many years, the most common method of fastening pages in library binding has been "oversewing". This requires no folds — if they exist they are generally cut or ground off — because the sewing is done through the stack of pages, rather like sewing through several thicknesses of fabric on a sewing machine. This produces a binding of great strength, and because it is done by machine it is relatively fast and thus less costly. But it too has disadvantages: a good quarter inch of inner margin is consumed in the sewing, the binding is tight so the volume doesn't open well, especially if the paper is heavy or stiff, and if the paper is or becomes brittle the needle holes act as perforations so pages break out easily. Oversewing is a bad word to conservators; but it does have a place, I believe, in volumes with wide margins and good paper which are likely to receive heavy use.

Of increasing importance today is the third major fastening method, adhesive binding. In fact, for books with no signatures and narrow margins it is the only reasonable option — but the choice of adhesive and method of application are very important. The simplest method involves brushing or rolling a layer of adhesive along the square edge of a stack of pages — the way pads of note paper are put together. The trouble with this is that, unless the paper is very porous and the adhesive can penetrate the fibers before it sets, the pages will tear out just like sheets from a note pad. The better approach involves "fanning" the sheets by bending the whole stack slightly so that the adhesive is applied to a narrow strip along the side of each page. The pressure is released immediately so that the stack resumes its square shape and the adhesive thus bonds each sheet to its neighbor instead.

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of only to the adhesive layer itself. Fanning in both directions in rapid succession produces the best result, and there are cunning machines for doing this.

The choice of adhesive is the other important factor, and controversies rage over hot-melt vs. cold-melt. As the names suggest, one is liquid only when heated and sets quickly when cooled, while the other is liquid at room temperature and sets only as it dries. In a large scale operation, the hot-melts are more efficient because you don't have to allow space and time for drying. But if the temperature in the machine is not perfectly regulated the adhesive may set before it has firmly grabbed the paper. So far, we have had best success with a binder who uses a double-fanning process with a cold-melt adhesive, which has worked well on stiff glossy or coated papers generally resistant to adhesives. New developments in adhesive chemistry are promising, and I suspect that, if publishers continue the no-margin trend we may be forced to rely more and more on adhesive binding.

Rounding and backing are major steps, after fastening the pages together. This is the process of shaping the square block of pages into the rounded "book" shape, which helps the volume retain its form and strength against the pull of gravity. By illustration, telephone books and Sears catalogs are not rounded, and you know how concave their spines become. This is a costly step that some binders cut out on so-called "budget" bindings. On thin volumes it is not crucial; but rounding is needed for thick or heavy volumes.

Cover construction, the amount of spine reinforcement, and the methods for attaching and reinforcing the hinges that hold the book block to the cover are the other major variables. Stronger, more durable methods and materials are correspondingly more expensive, so trade-offs must be made to match the ruggedness of the volume with the probable use it will receive. A cheaper binding is not a bargain if it doesn't hold up.

As for the materials used in the binding, I'll make just one suggestion today: be sure to specify acid-free end papers.

Decisions about what and when to bind are the next major component in a binding program. From a preservation point of view, a binding is the best practical method for protecting the pages of a book, and it follows that unbound materials meant for extended retention should be bound as soon as possible. Paperbacks should be bound before going to the shelf. Serials should be bound promptly, before too many covers or whole issues have disappeared. Don't try to save on binding costs by holding issues till you have a three-inch volume. You may spend more on replacing lost issues if they kick around loose for too long; and the thicker, heavier volumes will not hold up well on the shelf. Two inches is quite enough, and publications on a very heavy paper are better in even thinner volumes.

Finally, the most critical factor of all in a binding program is the relationship you establish with your binder. Cooperation and mutual understanding of needs and possibilities are essential. Visit your binder's plant. This is the best way of learning about the physical processes and of judging a binder's ability to provide what you want. Most binders are very nice folks who are in the business to provide us with a service we badly need. Nobody makes a fortune as a library binder — in fact, every binder's ability to provide what you want. Most binders are very nice folks who are in the business to provide us with a service we badly need. Nobody makes a fortune as a library binder — in fact, every time I visit a bindery I wonder how they can afford to stay in business at all. Your binder probably knows a good deal more about the physical nature of your books than you do, and sharing that knowledge with you to enhance your relationship is good business for him, so take advantage of it.

If you are in the unfortunate position of having to put out your contract for bid, be sure you have detailed specifications which emphasize quality materials and methods, or you may be stuck with an inexpensive binding that is literally "cheap goods". Learning what to ask for, and how to match available binding styles to individual books in all their variety, is a slow, often painful process. But it's not really more difficult than learning to catalog.

There are some things that can't be bound — or shouldn't be — but which still need some form of protection. These include single sheets such as maps, posters, prints; items with paper so brittle that neither sewing nor adhesive binding is safe; rarities whose original covers, though deteriorated, are too valuable to replace. For such items, a wide array of protective wrappers, boxes, portfolios and other devices has been developed, to hold the pieces together, shield them from harmful environmental agents, and facilitate safe shelving and handling.

An increasing number of such protective containers are available ready-made, in a variety of sizes and styles, from library and conservation suppliers. Others can be custom-made to fit particular items, and the skills and materials for this are within the reach of most libraries. A few guidelines should be kept in mind: the materials should be acid-free, or they will contribute to the deterioration of the items they are meant to protect; the design should be simple, so that items can be removed for use easily (slip-cases are not good since getting things in and out can be damaging); they should fit snugly — but not too tightly — at bottom and sides when closed so the item will not rattle around inside.

A fascinating technique was developed at the Library of Congress for the protection of single
sheets. Known as polyester encapsulation, it involves sandwiching a page, map or poster between two sheets of transparent film, slightly larger all round than the item, and fastening the edges all around with a narrow strip of double-sided adhesive tape. The polyester film — Mylar is one of the trade names — is an inert, flexible material which has survived extensive artificial aging tests. The tape is Scotch brand #415, which has also stood up to age testing. Encapsulation protects completely from air and dirt (not from light — how splendid if they would develop a polyester film impregnated with ultra-violet filtering materials); the procedure also supports and strengthens the contents so they can stand extensive, even rough handling. And both sides can be viewed. The materials are readily available and reasonably priced, the technique can be learned in a few minutes, and — the final beauty — encapsulation adheres strictly to the conservator’s "law of reversibility": don’t do anything that you can’t undo later if a better method comes along. Because the tape is only attached to the two sheets of film, not to the item itself, the capsule can be cut open and the contents removed at any time.

Though designed for single sheets, the process can be used for protecting whole books, by encapsulating each page, leaving an extra margin of polyester film for a binding edge. Though this makes a fat, rather funny-looking book, especially since post-binding seems most successful with the film, I have seen it used very successfully to reassemble a volume of large, badly-deteriorated prints, at far less cost than would have been involved for complete restoration.

Even with comprehensive programs for careful shelving and handling, good timely binding, and protective wrapping, there will still be a lot of items that are just plain falling apart. For a few, the rare treasures that ought to be preserved in original form no matter what, you will have to turn to a professional conservator. They are still few and far between, but their numbers are slowly growing. A good conservator can employ many methods for cleaning, repairing, deacidifying, strengthening and rebinding — very painstaking, very expensive work. For the rest of the basket cases, for which such treatment could not be justified even if you had ten conservators on your staff, you will have to consider replacement and/or disposal.

This notion makes a lot of people shudder, but unless your library is strictly a rare book collection, replacement must be a big part of your preservation program. Remember, in at least nine cases out of ten your patrons are interested in the intellectual content of your materials, not in their paper or bindings. They want to read a story, or study an idea, or check some facts, and it doesn’t often matter to them whether they use the first edition or the seventeenth, a reprint, a photocopy, or even a microform.

A good replacement program will have several elements: a decision-making mechanism for choosing what should be replaced and what should simply be discarded; an efficient searching procedure for discovering the availability of replacements, in hard copy or microform, coupled with standard acquisition routines for getting them; and a program for creating replacements when none can be found. The latter is the most challenging, and includes several possibilities. Your crumbling original can be photocopied onto permanent/durable paper and the copies bound and substituted for the original on your shelf. You can do this yourself, or pay someone else to do it. And if your copy is already missing half its contents, you may be able to acquire photocopies from another library.

Other libraries may also be a source for custom-made microfilm replacements, if you don’t have a microfilming capability yourself. And here I have to get in my pitch for preservation filming. If the negative is properly made and stored, something preserved on film is preserved once for all because the contents can be reproduced repeatedly at relatively low cost. The initial cost of filming is comparable to photocopying — but if the photocopy later needs replacement you have to do the whole thing over again, whereas if your service microform is damaged, or if another library also wants a replacement, a new one can be printed for a fraction of the original cost. Many thousands of "master negatives" already exist of material that would otherwise have been lost to all of us, and we should support all efforts to expand this national information resource, and work to coordinate our microfilming activities so that we avoid duplication and save as much as possible through this preservation technique. (See also the author’s “Developing a Preservation Microfilming Program”, LIBRARY JOURNAL, November 1, 1974.)

There are at least ten dozen other things I ought to be telling you about how to carry on a preservation program, but time’s march is inexorable. Let me close with a few thoughts on training of staff, and patrons. There are a number of skills that are needed to operate the various components of a preservation program: careful shelving and handling techniques, cleaning and stack maintenance, bindery preparation, creating and/or applying protective containers, searching for and acquiring replacements, and above all the development of the necessary decision-making skills for identifying materials in need of preservation attention and selecting the appropriate treatment for them. There's no magic formula for imparting these skills, but on the other hand it's no more difficult than preparing
people for all the other things we do in libraries. What is needed is some time, a little research and study, and some thoughtful planning to incorporate available knowledge and techniques into your existing system. (See the author's "A Local Preservation Program: Where to Start", LIBRARY JOURNAL, November 15, 1976.)

In addition to specific skills for operating a preservation program, there is the vital area of attitude. We, and our patrons, must develop a keen awareness of the problems and the contributing factors. Pep talks during orientation and staff meetings, publicity about preservation activities both within and beyond the staff, exhibits — especially those eye-catching "horrible examples" — posters in the stacks illustrating the proper way to remove a book from the shelves, warning notices on protective containers, signs on copy machines exhorting against smashing spines to get two pages in one exposure, book marks with cautionary advice on proper care — there are just a few of the ways we can improve understanding and enlist the support of all levels of staff and patrons in this long struggle.

I hope you have noticed that I haven't mentioned any dramatically new activities to be added to your library as a "preservation program", but rather some new attitudes and approaches to familiar activities. Some aspects of preservation will cost a great deal, but we can prolong the life of a lot of material at no additional expense, just by doing differently many things already part of our budgets.

There are no quick and dirty solutions, no instant preservation programs, any more than we have had instant automation of our libraries. Instead, we must begin with the resources we already have and build, upgrade, improve, expand — knowing that the hour is probably too late to save everything, but confident that, once awakened to the problem and giving it our most thoughtful and energetic efforts, we can and will be able to pass on to the next generation the heritage we have received.

Thank you for your attention. And if I have left out the one thing you were desperate to learn about, there will be time for questions, and I love making up answers.

**PRESERVATION OF NONPRINT MATERIALS**

**LAWRENCE S. ROBINSON**

Preservation Microfilming Officer

The Library of Congress

Part I — Planning and Developing Preservation Programs

A. How Conservation Programs Are Initiated. Usually begin in one of two ways:

1. Library administration determines there should be a conservation program — prepares a basic planning document — searches for qualified person to develop the program in line with the basic document. Stanford University, among others, recently followed this procedure. Mrs. Sally Buchanan, the new Conservation Officer at Stanford, will make the final presentation in this Colloquium.

   In many instances, the administration's basic planning is carried out with the initial assistance and advice of persons of wider experience in the field of conservation. Stanford followed this practice, as have others.

   What develops from such initial efforts is a document that outlines the problem, sets forth the objectives of the program in broad general terms, establishes a budget, and establishes the first position with direct responsibility for conservation, makes necessary modifications to the library organization chart, and outlines the responsibilities and authority of the newly created position. The search then begins for an appropriate person to fill the job opening.

   Such basic documents can never do more than outline the problem and suggest the broad parameters of a suitable conservation program, however. Fleshing out the details of the programs and creating what may be called the Conservation Procedure Manual, can only be done by the Conservation Officer after he or she comes on board. Nor can such a Manual be developed overnight. It will develop slowly over a period of time, as the Conservation Officer becomes intimately acquainted with the problems and develops the solutions to them.
2. Less frequently, the library remains more or less oblivious to or uninterested in the problem until some staff member(s) brings it to the administration's attention.

In such situations, the staff member involved, more often than not, finds it necessary to do a selling job on the administration. In other words the administration must be convinced by solid evidence of the degree of deterioration taking place in the collection and by a demonstration of the costs and consequences of having no conservation program.

Such education of the "boss" may not always be easy. I remember one director of a major U.S. research library who once stated in my presence that he would not give a nickel to help preserve any book that was not published in the U.S. If I were on this director's staff I doubt that I could ever convince him of the value of a broad-scale conservation program. I suppose I might convince him to take some interest in preserving an important collection of Americana, but with such an attitude I would probably be reluctant to try even that.

Fortunately, not all administrative officers are likely to be that hard to convince. At the same time, let me caution you that if you, as a staff member, are in a situation in which the administration shows little or no interest in conservation you will have a selling job to do. This means the entire burden of promoting such a program falls on you, or on you and a few interested colleagues. This, in turn, means that you must first educate yourself in the fundamentals of conservation.

In the remaining time I have allotted to this portion of my talk let me try to outline some of the ways in which you can educate yourself and some of the elements of a productive conservation program. Most of what I have to say will apply with equal emphasis to the Conservation Officer who has been appointed after the administration has already decided to develop a conservation program — unless the Conservation Officer already has a good background in conservation.

B. Commitment of the Administration/Basic Responsibilities of the Conservation Officer

No worthwhile conservation program can succeed without a firm commitment by the administration. A simple verbal commitment, even a written policy statement, is of little value unless there is an understanding and a realization that such a program will require funding of an ongoing nature. The first budget for the conservation program need not be large but it must be more than a token.

Any worthwhile program also requires that the administration vest some authority in the person chosen to head the program. The library staff must know that you have been assigned responsibility for conservation and that the administration backs your new position.

You should realize, at the same time, that any new program can have rough going on occasion. Do not expect that your new position will automatically bring you the respect and cooperation of all staff members. Many of your colleagues may not understand what you are trying to do. Teaching them the reasons for conservation and the procedures, and obtaining their full cooperation can be a long, drawn out process of education and persuasion.

C. Educating Yourself To Be a Conservation Officer

1. The untrained person. In looking around at the Conservation Officers in some of our larger libraries, I am struck by the fact that nearly all of them came to their positions with little or no experience. They had not been trained as conservators, nor had they been trained as conservation administrators. Indeed, unfortunate though it is, there is presently no place in the United States where one can get training as a conservation administrator. We can hope that Mr. Banks' proposals for the new conservation program at Columbia University are eventually implemented and that such training becomes available.

2. Training yourself
   a. Read widely in the field — there are many good bibliographies.
   b. Attend seminars and workshops — try to choose carefully — cover the general field of conservation as broadly as possible. Cover such peripheral fields as micrographics.
   c. Visit libraries that have conservation programs and talk to the person in charge. Learn their problems and their solutions. Obtain copies of their basic policy documents.
   d. Join a conservation organization. I suggest two essential ones:
      1) The American Institute for Conservation, and
2) The Paper Conservation Institute, based in London. In addition, join a local or regional conservation group—if there is one.

  e. See that your library has a basic collection of monographs about conservation.

  f. Establish your own conservation file—copies of relevant articles from the journal articles of the last ten years.

  If you were appointed after your administration had decided to establish a conservation policy, such self-training will be essential to getting your program off to a good start. If you have to first educate the administration, the background afforded by the program I have outlined above will give you the foundation on which to tackle the administration.

3. **Knowing your collections.** If I were just starting out to establish a new conservation program, the first thing I would do would be to survey the condition of my collections or, better yet, learn from an expert and call in an outside consultant to undertake a professional survey.

   Such surveys can tell you a great deal about the condition of the collection. They will identify and pinpoint a wide variety of problems and give you a good cross section of the problems. One advantage of using an outside consultant, particularly for a first time survey is that he will know what special things to look for. You can learn from the experts.

   Surveys can be as detailed as you wish and as you have time and money for. Personally, and there are those who will disagree, I do not see any particular benefit to the practice of making a determination of the pH in every book on the shelf or of every book in some random sample. Non-destructive tests made by such techniques as the Brom-Cresol indicator in the archivist's pen, pHysdnon papers, or EM non-bleeding strips are not sufficiently accurate or reliable to be of real significance. Such techniques take time and the accumulated data tell you only that the acid content is high. You could probably have stated this with firm conviction in the beginning.

   a. The physical damage

      In book collections the important information is in the number of damaged bindings, the nature and extent of such damage, the yellowed or embrittled paper, the torn fabrics or leather, the loose or damaged text-blocks.

      A good survey also looks at other materials: pamphlets, maps, manuscripts, newspapers, prints, drawings and photographs, as well as at nonprint materials such as phonograph records, audio tapes, cassettes, slides, microfilm, microfiche, etc. Note and record the nature and the extent of damage.

   b. Storage and shelving

      Survey the type of storage the library provides for all types of materials.

      1) Methods of shelving books—on the fore edges, without book supports, vertically when they should be horizontal, sticking out where they are damaged by passing book trucks, etc.

      2) Storage of maps—in acid-free and buffered folders, in limited number per drawer, cleaned and in good repair.

      3) Storage of manuscripts—in horizontal or vertical boxes.

   c. Investigate environmental conditions

      1) How carefully are temperature and humidity controlled?

      2) How is the light controlled?

      3) Does the air-conditioning system work continually or intermittently? Is it shut down at night and/or on weekends? Does the library own and use a hygrothermograph? Does the building engineer know how to make the system work? Does he care? How good is the air-filtering system?

   4. Does the library have a disaster plan to be followed in case of flood, fire, windstorm, hurricane or earthquakes?

   5. **Study how binding is handled in the library**

      a. Is binding responsibility delegated to a clerk or to someone professionally knowledgeable?

      b. Does the library have its own binding specifications or does it leave all decisions to the binder?

      c. Does the library use a certified binder and member of the Library Binding Institute, or does it send its books to a local non-LBI bindery?

      d. Is the library's binding program adequately funded or does the binding program fall farther behind each year?
6. How well does the library fund preservation activities
   a. Not at all?
   b. Library binding only?
   c. Other programs
Library binding excluded, the administration should be willing to devote a minimum of 5% of the book budget directly to conservation — 10 to 15% would be better.

D. Report the Findings of Your Survey to the Administration

Do this in writing — indicate not only your findings but all reasonable recommendations — don't try to accomplish too much at one time or make elaborate recommendations — take a few steps at a time unless you have reason to believe your administration is ready to jump in with both feet!

E. Educate Your Administration

Your administration may not be aware of the problems or may think the problems unimportant, or may not understand the importance of a proper environment, proper physical care, adequate funding, or the other elements of a good conservation program.

You will have to start by educating your superiors — showing them actual damage, discussing the effects of a bad environment, pointing out how many dollars the library is losing by the damage and deterioration.

But let us assume that the administration is interested in inaugurating a conservation program and puts you in charge of establishing and administering a new preservation program for your library. How do you proceed?

F. Understand the Limits and Extent of Your New Responsibility

Try to obtain as much authority as possible in order to be able to establish a meaningful program. Unless you are empowered to make certain basic decisions, to hold discussions with key individuals on the library staff and with those outside the library, unless you have some funding, you may find your new responsibility is largely meaningless.

G. Again, let us make an assumption: this time that you have a free hand or, at the least, a reasonable degree of latitude for action. What are the first things you do? In all probability you will be a one-man show, at least initially. You can elect to try to do the entire job yourself or you can seek the assistance of others on the staff.

Circumstances will be different in different institutions but other factors being equal, I recommend the formation of a 'conservation committee' made up of those staff members most concerned and most knowledgeable about conservation. Don't make this committee too large but do have a committee representative of varied library interests.

Work through the committee as much as possible, depending on the several members to keep you informed about the status of the collections for which they are responsible, about special problems, the success or failure of various programs, and other matters.

H. Undertake Specific Conservation Programs

Once you have the authority and a working committee you can begin to undertake specific programs in conservation. Some of these programs will have immediate benefits but the majority must be viewed as long term.

1. Do everything possible to bring the physical environment under control.
   a. Temperature and humidity — monitor these factors continuously in all parts of the collection. Work with your building engineer to gain his cooperation in making your system work efficiently and effectively. If the system appears to need overhauling, or replacement, or modification, request authority for an independent engineering study to develop a proposal and cost estimate.
      If high humidity is the result of inadequate moisture control for one or more reasons determine what can be done to correct the situation. Don't wait until the condition is out of control.
      Variations in temperature and humidity — daily, weekly, seasonal — educational problem.
   b. Filtering and pollution control. If either seems to be causing problems try to get an evaluation by an independent engineer.
   c. Lighting. The survey you will have conducted earlier will have indicated the degree to which
light may be a factor in the deterioration of the collection. To bring the light under control, begin by installing ultraviolet filters over the lights in the rare book room and in the special collections. As the budget permits, continue this program throughout the collection area in the stacks.

In closed stack areas it may be desirable to install timed switches or, at the least, to switch the lights in the individual aisles so that lights are only turned on when necessary.

If there are areas in the library where books are exposed to direct or indirect sunlight it will be necessary to install some type of control: venetian blinds, draperies, plastic films, or other devices.

Check lighting levels. In the past, some libraries were designed with light levels 50 percent or more higher than necessary for good vision. If your survey showed light levels of over 60-70 footcandles discuss possible modifications with your building engineer. It may be feasible, for example, to remove one tube from each fixture, although not all systems permit this. There may be other modifications you can make. In any case, 50 footcandles of good quality lighting is adequate for any library.

Lighting exhibits. Don't forget to check the lighting of exhibit cases. Remember that visible light can cause damage to paper and leather as well as ultraviolet. To protect valuable items on display keep light levels low. Few exhibits require more than 15-20 footcandles to be legible. Protect all documents by UV shields over the tubes or by UF-3 Plexiglas in sheet form between the tube and the document. If the document is particularly sensitive to light use a sheet of Kodagraph or other filtering material for protection.

d. Insects and rodents
1. Keep food and beverages out of stack area.
2. If heavily infested with insects and rodents contact a local exterminator.
3. EPA allows for the use of certain restricted toxic chemicals under certain conditions. Check before use.

e. Fungus or mold
1. Fungus or mold growth can be effectively eliminated by proper temperature and humidity control.
2. Temperatures in the range of 65 to 75°F. with a relative humidity of 45 to 50% will have this effect.

2. Improve shelving, storage, and book handling techniques
We will consider this subject in detail later. Here, I want to emphasize the importance of proper shelving, storage, and book handling techniques in any properly managed, effective conservation program.

This is an area in which staff education and training play very important roles. Too often, unfortunately, librarians become so familiar with books and are so constantly surrounded with them that we treat them almost with contempt. Pages, stack attendants, and others responsible for the routine handling of books must be taught how to handle them without damage.

3. Take all possible steps to avoid a disaster but prepare a disaster plan just in case.
Avoiding disasters and preparing a disaster plan will be explored in depth in our next session. At this point let me emphasize that 98 percent of the accidental or acts-of-God damage in libraries is preventable.

4. Where do you go for general help?
a. Is library insured?
1. Insurance company will provide general help.
2. If uninsured, staff members should ask wives, sweethearts, brothers, sisters, and friends to volunteer their help.

b. Library schools, colleges, high schools.
c. Community groups
d. Churches

5. Where to go for professional help
a. The Library of Congress
b. Local archives
c. American Institute of Conservation (AIC)
d. New England Document Conservation Center (fumigation chamber on wheels).
PART II — PRESERVING NONPRINT MATERIALS

A. The Nature of the Problem

The problem of preserving nonprint materials is as difficult as that we experience with preserving paper artifacts. It is made more difficult by the fact that particularly all nonprint items are of synthetic or plastic materials. Each has different properties, are processed in different ways and used in a wide variety of equipment and in many instances require different environmental conditions for their long range preservation.

As in the case of the modern day book, librarians have no control of these materials and, as they have frequently learned to their sorrow, some vendors will sell them anything whether it lasts two days or two years.

Now let us look at the various nonprint materials and the factors involved in their preservation.

B. Microfilm. Three different types on the market each different. Librarians have little choice over what they are buying and often do not know and cannot find out. Three basic types are: silver halide, vesicular, and diazo.

Silver halide is accepted by ANSI for archival permanence. There are still reservations about diazo and vesicular. However, diazo and vesicular film can be and are used primarily for working copies. Master negatives should only be made on silver halide.

**Storage.** Store in acid-free boxes in steel cabinets or in larger acid-free boxes, holding 12 reels in each box, on regular shelving. Do not use humidified cabinets. Boxes in which films are received should be replaced with boxes of acid-free board or metal.

**Environmental conditions.** Working copies can be stored at the existing conditions in the library, assuming these conditions fall within the range of 35 to 50% relative humidity and 65 to 75°F. Master copies on silver halide should be stored at 30 to 40% relative humidity and 60-65°F. Such conditions, normally require that these copies be stored in a special vault with a separate air conditioning system. Only a few libraries, however, will have this problem.

C. Microfiche. In general, the same conditions exist with regard to microfiche as with microfilm, the materials involved are the same.

**Storage.** Microfiche should be stored in envelopes of acid-free paper or of Tyvek. Envelopes containing fiche are best stored in the drawers of steel cabinets, not wood, which may have harmful substances in the glues, finishes, or in the wood itself. Microfiche filing boxes made from high quality acid-free paper stock are available from some companies, Conservation Resources, Inc., in Alexandria, Virginia, for example, and these are very satisfactory. Metal filing boxes, as distinguished from cabinets are also satisfactory. In addition, plastic file boxes are available.

**Environmental conditions.** Storage conditions for microfiche are the same as for microfilm. Again, since most libraries use only working copies they can store these under the general conditions of temperature and humidity existing in their library.

Experience suggests that microfiche have a finite useful life and will eventually fade or turn yellow. There are no hard and fast rules and one purchase of fiche may have a shorter or longer life than another, even when stored under essentially the same conditions.

D. Microcards and Microprint. These materials are, of course, on a paper base rather than a film base and deteriorate for the same reasons other paper artifacts deteriorate. However, both are produced on a much better grade of paper and have a much longer life than ordinary high-acid book paper.

**Storage.** Both formats are best stored in the special containers in which they are usually purchased.

**Environmental conditions.** Environmental conditions suitable for other paper materials are also suitable for microcards and microprint, i.e., 68 to 75°F. and 40 to 50% relative humidity.

E. Phonograph Records. Phonograph records, particularly older records likely to be encountered in archival or gift collections were made on a wide variety of materials. Most are susceptible to damage from high temperatures, high humidity, improper storage, uneven pressure, and other factors. These are discussed below:

**Storage.** In most cases, active, circulating collections will be damaged by over-use long before they will deteriorate from improper storage conditions. Most libraries consider such records expend-
able so that there is little justification for any elaborate measures to preserve them. At the same time, there are precautions that should be observed even with expendable records.

Leaving the plastic covering on a new record can lead to warping or distortion because an uneven pull on the record sometimes result. The greatest damage from warping arises when records are subjected to uneven pressure, i.e., when records are under restriction or pressure over one part of their area but not over the other part. When stored on ordinary library shelving the shelf end brackets keep the records under some degree of restriction over the lower half of the record, while the upper half is without restriction.

Record shelves should have end brackets tall enough to hold or compress the records over the entire surface. Full height dividers should be located approximately every four inches. This arrangement provides an even pressure over the entire surface of each record and significantly reduces the tendency to warp. It goes without saying that records should always be packed or stored tight enough so that they are held vertically. Records allowed to rest in a sloping or slanted position, like books, will bend and distort under their own weight.

Such storage facilities for expendable records may be debatable since the special record shelves required are expensive. They are essential, however, for archival collections.

Also essential for archival collections is the polyethylene lined jacket. These special record jackets, first developed for the Library of Congress, as a result of the recommendations of A. G. Pickett and M. M. Lemcoe of the Southwest Research Institute, consist of a four-part lamination made into a record jacket. The outside is a high quality paper. The next layer is polyethylene. This is followed by a layer of aluminum foil, inside of which is a final layer of polyethylene. In archival use these jackets are best sealed at the top, after the record has been ultrasonically cleaned. This jacket is not only moisture proof, it protects the record against the entry of atmospheric pollutants. The jacket also has the advantage of the soft, polyethylene inner layer that reduces abrasion of the grooves.

Ideally, master record collections should be dubbed onto tape, then ultrasonically sealed, packaged in the envelopes just described, and stored vertically on shelves having full-height dividers.

Environmental conditions. As with other library materials, temperature and humidity must be kept within normal parameters. The temperature and humidity conditions suitable for the preservation of paper are suitable for phonograph records.

F. Audio-tapes (reel-to-reel, cassette, cartridge). In these materials we are dealing with some unusual requirements for preservation as a result of their magnetic character. Three distinct types of magnetic audio tapes are now on the market: iron or ferric oxide, chromium dioxide, and the newest so-called "non-oxide" or metal tapes. Such magnetic tapes require more special care — if their information and fidelity are to be preserved — than any other print or nonprint format. Unfortunately, time does not permit an extended and detailed discussion of tape preservation measures, but we can cover the major points:

1. Insofar as possible, tape recorders should be operated in a low-dust and environmentally controlled area. Humidity must be kept within a range of 40% to 60%, temperature between 65° and 75°F.
2. To avoid tape damage all components of the recorder must be kept scrupulously clean. Never handle tape except with lint-free gloves.
3. Smoking, drinking, and eating should not be permitted within a ten-foot radius of the recorder or the tape storage table.
4. "Cinching" is a condition in which layers of tape in the middle of the reel appear to be rippled or corrugated. It is caused by a poorly aligned tape transport, by tape with poor layer-to-layer friction, or by improper winding. When this condition is observed the entire tape should be rewound to establish a uniform condition.
5. Ideally, tapes should be rewound twice each year to eliminate stresses that might cause damage. Tapes should always be left in "played" condition — not fast-wound.
6. If the storage ambient temperature differs from the operating ambient temperature by more than 8 to 10 degrees, the tape must be conditioned in the operating temperature at least 8 hours and preferably 24 hours, to permit the tape to reach thermal equilibrium within the pack.
7. Tapes should always be stored in the box they came in and in a steel storage cabinet. Vertical storage is preferred.
8. All oxide-coated tapes shed some of their particles of oxide with every playing. These particles accumulate on the tape heads, guides, pressure pads, and the capstan/pressure-roller drive system. To avoid slippage in the drive mechanism and lost signals, frequent cleaning is essential. You can use an ordinary cotton-tipped swab and rubbing alcohol to remove these particles of oxide from all parts of the recorder with which the tape makes contact.
9. Magnetic tape is particularly susceptible to stray magnetic fields. Even heavy thunderstorm activity overhead can damage tapes. The effect of such stray magnetic fields is a result of the fact that the recorded signal itself is only a modulation of the residual magnetism retained in the thin layer of the magnetic coating compound. Thus, any further exposure to a magnetic field degrades the original signal.

These damaging external magnetic fields can originate in the tape recorder itself, in nearby electric motors or generators, or in unshielded dynamic loud speakers with external permanent magnets.

Professional tape studios "degauss" their equipment every day — approximately every 10 to 20 hours of operating time. A magnetometer, an instrument for measuring permanent magnetic fields around a recorder can be obtained from Robert Annis at 1101 North Delaware Street, Indianapolis, Indiana 46202. Mr. Annis also sells a demagnetizing device. Both instruments are available in kits. It is also possible to buy de-magnetizing tapes that accomplish the same purpose.

It is difficult to overemphasize the importance of these several precautionary measures if one wishes to preserve the information on magnetic tapes.

G. Videotapes. Nearly all of the precautionary measures necessary to preserve the information recorded on magnetic audiotapes apply also to videotapes, since both formats are magnetic.

Videotapes must be protected from stray magnetic fields, careless handling, food, drink, and tobacco smoke. Poor winding, leading to cinching is just as much a problem with videotapes as with audiotapes. Necessary environmental conditions of temperature and humidity are the same. Preconditioning to bring the tape to room temperature is important. A cold tape used on a warm machine can cause condensation of moisture on the drum, and this causes the tape to stick to the drum. Excessive heat causes breakdown of the magnetic character of the tape and causes loss of signal and thus of recorded information.

Storage in cabinets or closets, near radiators, heating vents, steam pipes, and similar heat sources is a sure way to damage videotapes as well as audiotapes. Not long ago there was a university library that stored tapes of all of the speeches of its presidents for the previous ten years on the tops of filing cabinets exposed to the direct rays of the afternoon sun. This is not the way to preserve recorded information.

Let me add here that heat is as damaging to paper as to tapes. I’m reminded of the research library that stored a significant portion of its rare book collection in the basement adjacent to the furnace room. In the winter, the temperature generally stayed in a range of 90° to 100°F. Included in the materials stored there was a set of Audubon’s *Birds of America* in the elephant folio edition, valued at a quarter of a million dollars. The damage was very serious, yet with a little common sense and some basic knowledge of the effects of the wrong environment, this could have so easily been avoided.

H. Magnetic Computer Tape. One encounters the same problem here as with audiotapes and videotapes. Environmental control is absolutely essential. Physical damage from careless handling and other causes must be avoided at all costs.

I. Filmstrips. Filmstrips in color, unless they are master copies, produced and stored by the institution, should be generally regarded as expendable. The environmental controls required for paper and for magnetic tapes will also help to preserve the filmstrip image. However, physical damage caused by student and faculty users and the impossibility of retaining the color image for more than a few years, unless the strips are stored at a temperature of freezing or below, means that such materials have a limited life. For maximum protection they should be stored in the plastic containers in which they are received, in steel cabinets or on steel shelving in special racks. Storage in cardboard containers is not recommended because of the acid, the sulfur content of the adhesives usually used in such boxes, and other chemical factors. Acid-free boxes are satisfactory, but storage in drawers is preferred.

Black and white films strips are more stable than color and if properly restored may be expected to retain a good image for a long time. However, physical damage will probably make these unusable well before deterioration of the image.

J. Slides, 35 mm. As in the case of filmstrips in color, so with 35 mm slides. The image is not "permanent", in the full sense of the word, under ordinary environmental conditions. However, the stability of color slides depends on several factors, including:

1. the type of film,
2. the way in which it was processed,
3. the environmental conditions in the storage area, and
4. the frequency of projection.

The Eastman Kodak Company, for example, states that "Most original color slides made on
Kodak camera film should retain satisfactory image quality for many years, provided they have received high quality processing; have been treated with care in respect to heat, light, humidity, and other hazards... and have been stored in the dark at a temperature of 70°F. or less and a relative humidity between 15 and 40 percent." Eastman goes on to note that among their current films, Kodachrome has the best dye stability.

The expected lifetime of Eastman color films is approximately as follows, when the materials are stored in the dark:

- Significant dye fading on Kodachrome after 50 years.
- Perceptible dye fading on Ektachrome in 10 to 20 years.
- Noticeable fading on Ektachrome and Ektacolor Slide Duplicating Films within 5 years.

Much longer life terms are possible if these materials are stored under refrigerated conditions of 35°F. Very long, essentially indefinite image retention in Eastman color films can be assured if stored at about -5°F.

Black and white slides, if properly processed and stored under normal conditions, may be expected to have a very long life.

Slides may be stored in a number of different ways. Inactive collections, if not kept under refrigerated conditions, are probably better stored in drawers. So stored, however, they are less convenient to use. Probably the most convenient, and, at the same time, equally safe storage method is to store 35 mm slides in polypropylene sheets which are then placed in special 3-ring binders. These sheets are 9½” x 11” in size and thus require a binder slightly larger than standard. These binders can be stored in the dark, in steel storage cabinets or on regular library shelving. Each sheet holds 20 slides and the special binders usually hold 20 sheets, for a total of 400 slides. These sheets are transparent and can be clipped to the front of a light box for easy viewing. The same sheets can be obtained to hang on rods for filing in standard file drawers equipped for Pendaflex folders. Polypropylene is completely inert and safe for all slides. The Library of Congress has used this method for many years and found it totally satisfactory.

It should be noted that there are other slide-holding sheets on the market but nearly all of these are made vinyl and are not safe for slides because of the acid they give off. Only tri-acetate or polypropylene sheets are completely safe for color slide storage.

K. Other photographic materials. Other photographic negatives require precisely the same environmental storage conditions and have the same life expectancy as do 35 mm slides. Black and white negatives have quite a long average life if properly processed, properly stored, and properly handled.

Negatives, including glass plate negatives, should always be stored in individual envelopes. Acid-free envelopes have been used with good success in the past and continue to be widely used. Some authorities have reservations about such envelopes because of their alkalinity, but the fact is that the calcium carbonate in the envelopes is non-volatile and almost completely insoluble and can not damage either prints or negatives. However, storage envelopes of Tyvek or tri-acetate are also available for these purposes, and both are completely safe.

Color negatives should also be stored in individual envelopes. Effects of temperature on these materials are the same as on 35 mm slide materials.

Photographic prints are also subject to fading and have essentially the same storage characteristics as negative materials. Storage in individual envelopes is recommended. Many study print collections are backed on board for easy handling and use. In such cases, heavy acid-free paper or lightweight board is required. At LC one of the major problems in the storage of such damaging effects of acid, thousands of prints were mounted on such paper. For the past few years one major task of the Preservation Office has been to remount these important historical photographs on acid-free stock.

L. Videodiscs. For most libraries, video disc collections are still in the future, although this future may not be far distant. Since videodiscs are not based on magnetic principles, the damaging effects of stray magnetic fields will not cause problems. Information on the permanency and conservation treatment of these new forms of information storage is still coming in, but the following information is available.

RCA discs have grooves like phonograph records and are easily soiled by dust and dirt. They must be kept in special plastic containers that the industry refers to as "caddies." Abrasion too can be a problem, so the discs should never be placed flat on any hard surface.

The Magnavox disc is smooth surfaced. Here, a transparent plastic coating covers an aluminum-coated inner surface which, in turn, covers another surface into which are pressed millions
of tiny pits which represent digitally encoded information. I have been unable to obtain specific
information on the preservation of the Magnavox disc, but it is certain that the smooth outer plastic
surface will be subject to abrasion, just as are plastic eye glass lenses, watch crystals, and similar
objects. This means that these discs must be stored in soft envelopes, or in containers where there is
no opportunity for the surface to be abraded.

Other videodisc formats are in the offering but details on their longevity and their preservation
requirements must await further information from the manufacturers.

CONCLUSION

Let me add, finally, that the major part of any successful conservation program can be sum-
manized in three essential elements:
1. a basic knowledge of the factors that cause deterioration,
2. a liberal helping of common sense, and
3. a high degree of dedication to the task.

DISASTER PREVENTION AND ACTION

SALLY BUCHANAN
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Introduction

That libraries sustain disasters is a point not to be argued. By way of emphasis the following are
just a few library disasters which have happened in the last ten years:
1. 1972 — hurricane damage — Coming Museum of Glass and Library, $6.5 million
2. 1972 — river flood — South Dakota School of Mines Library, $1 million
3. 1972 — fire and water — Temple University Law Library
4. 1974 — fire and water — Alderman Library, University of Virginia
5. 1975 — arson fire — Smith College, Neilson Library
6. 1976 — explosion and fire — Walker Minnesota Public Library (Smallest Carnegie Library in
   America — total loss)
7. 1976 — frozen pipes due to open window, extensive water damage — Wheaton College Art
   Library
8. 1977 — explosion and fire — Langley Hall, University of Pittsburgh, Life Science and
   Psychology Libraries
9. 1977 — fire — Sir Sandford Fleming Engineering Library, University of Toronto — total loss
10. 1978 — arson fire — San Diego Aerospace Museum and Library, total loss
11. 1978 — fire — Stanford University Meyer Library, ¼ million dollar loss.

Over the centuries major libraries have been lost to fires, wars, and floods. Consider that the
great library at Alexandria was burned three times in its history, and was finally destroyed in 640 AD
with its contents as well as those of the great library of Pergamum given to Cleopatra to be housed in
Alexandria.

Constantinople’s library housing 120,000 volumes including some purportedly handwritten from
Homer’s dictation, was destroyed by war and fire in 807 A.D.

In the 11th century the caliph’s library in Egypt containing 1,600,000 volumes was burned.
In 1666 London’s great fire destroyed hundreds of thousands of books in over 20 libraries.
In 1728 the Royal Library of Copenhagen was destroyed by fire started by lightning.
In 1812 Moscow was burned destroying three major libraries.
In 1814 the infant Library of Congress was burned by the British.
In 1870 German shells destroyed the magnificent library of Strasourg.

Needless to say, the 20th century and its wars have destroyed many more books.
For many years people who have cared about library collections have spoken and written about the dangers to collections, and the need to plan to prevent problems. In the 19th century Talcott Williams, Melvil Dewey and William Frederick Poole consistently wrote expressing concern about preventing disaster. Thus our current concern is not without historical basis.

I. Prevention

Today I want to address preventing and coping with what I call “loud” disasters. These are the sudden, devastating ones which in a few minutes or hours can wipe out a large part of a library collection. The causes of such disasters are usually fire, flood, weather, wind or earthquake — what insurance companies like to call “acts of God.” These disasters are often much publicized because of the terrible monetary and intellectual loss.

At the same time, however, “quiet” disasters are occurring in all library collections. These are sometimes just as costly in fiscal terms as the loud disasters. But the destruction is gradual and less spectacular. These disasters are acidic paper deterioration, vermin infestations, poor environmental conditions, mildew infestation and abuse by people. These, too, require attention and prevention in every library. But, perhaps, are best attacked under the auspices of an established conservation program. However, it should be understood that the library complacent about lack of fire or flood should realize that books published since 1850 or so are deteriorating faster than we know what to do with them; and we continue to produce written materials on paper which will self-destruct in 30-50 years.1 Considering costs of acquiring and cataloging material, or of microfilming it to preserve the content, this is a shocking state of affairs. A real “quiet” disaster. And anyone who has had to fight a massive insect infestation, either natural to their environment or insects introduced from a foreign environment, can testify to the difficulty in eradicating the visitor and to the destruction that can be done before discovery. Most of us may not have the problem found in many African countries where the legs of shelves must be stood in oil to prevent termites from consuming hundreds of books overnight. But even in northern California where insect problems are minimal, red termites have recently chewed through a redwood floor, up into an enclosed oak bookcase and eaten the contents of valuable first editions, totally ignoring a shelf of worthless cookbooks.

And we are all familiar with the cost of time and material due to abuse by people — not only patrons, but also staff. My plea is that you not forget the “quiet” but insidious disasters going on while you plan to prevent the “loud ones”.

“Preventing” disaster may be somewhat a misnomer. Obviously we can’t prevent tornadoes or natural floods or earthquakes. What we can do is plan so well that we CAN prevent the worst from happening — we can lessen the effects of a disaster. In some instances we actually can do much to prevent fire or water damage by assessing individual situations and preventing the obvious. For instance, a library I am aware of ignored a leaking air conditioning system for 6 months until the faulty soldering gave way, dumping thousands of gallons of chilled water on the book stacks. Or another library which stored a valuable gift donation of several thousand books in the basement during the rainy season even though the basement flooded every year during the rainy season — and did again, to a depth of two feet!

First, let’s consider some of the major disasters which can befall libraries and what can be done to prevent them or to lessen the effects.

A. Flood and Water Damage

Natural floods bring with them mud, oil, chemicals, sewage and debris. As a graphic example of this kind of destruction read accounts of the great Florence Flood, or the flood to Coming Glass Museum and Library caused by Hurricane Agnes. In Florence the books were turned into sodden, slime-covered heaps of pulp. Paper is, after all, a natural product and although surprisingly sturdy does start reacting immediately even with clean water. If natural floods are a hazard in your area — or a potential hazard — determine if flood doors are feasible. Check on the techniques of sandbagging and the availability. Ask for advice from civil defense or local disaster prevention organizations so you can do all that could be expected if a flood threatens. Include in your plan detailed instructions for removal of material to higher shelves, floors or buildings. Install sump pumps, or know where they

can be rented. Be aware, however, that mud and silt will soon freeze up pumps if filters are inadequate. In addition, emergency generators may be needed. If there is nowhere to pump water, such precautions are useless until flood water recedes. Place more valuable materials higher on shelves or on higher floors if possible. Avoid storing library materials in areas susceptible to flooding like basement storage.

Clean floods are often caused by broken pipes, air-conditioning systems, roof leaks or water from fire hoses or sprinkler systems. Books react as quickly to clean water as dirty. But the problems caused by chemicals, oil and mud are absent. Clean floods can often be prevented by good facilities inspection, attention to early trouble signs such as dripping from roofs or pipes, and care when remodeling or construction is going on. The major water damage at Stanford University Libraries in November, 1978 was caused by careless construction workers. Holes were drilled in a foundation in preparation for some new pipes. When workers left for the day they failed to plug the holes. That night at 2:04 A.M. a large water main ruptured underground outside the library. The water quickly filled construction trenches and poured into the basement stacks through the construction holes.

A good way to lessen water damage if floods occur — especially the kind just described — is by water alarms. These are sold commercially and can be wired into your present alarm system or alarmed separately. In one kind, a sponge swells when wet, closing a circuit. Stanford has such alarms which informed plant services of the problem so that water was turned off in 30 minutes. Even so, 50,000 books were wet. Imagine the catastrophe if the problem had not been discovered until morning.

In addition, knowing what to do for wet books is an essential part of any disaster plan. Whether wet by flood, clean water or as a result of fire, all books start reacting by swelling. In addition boards warp, fabric and leather blister and peel away and glues and sizings wash off. After 48 hours the danger of mildew is of concern. If weather or inside environment is cool and dry, mildew growth may not be noticeable for 5-7 days. But warmer temperatures and higher humidity encourage mold development. Because mold spores are everywhere, it is impossible to eliminate them. Therefore the environment must be controlled after a flood. Bringing down temperatures by turning off heat or even breaking windows or turning on air-conditioning is necessary. Reducing humidity by ventilation, removal of wet carpets or use of large dehumidifiers and fans is also necessary. Chemical and biological action in books can be halted by freezing. Books may be frozen at -20°F or lower for as long as 10 years with no harm done. Large amounts of wet books should certainly be frozen to safeguard them. Even small numbers may be frozen until steps for drying are established. Freezing at very low temperatures will help dry books somewhat. If there are large numbers of books floating in water, it may be wise to leave some submerged until you can get to them. As long as books are submerged they will not mildew — but they will continue to swell and deteriorate chemically. Proceed with deliberate haste.

At this time, the best method for drying large numbers of wet books is the vacuum-dry technique. This has been described by General Electric, Corning Glass, McDonnell Douglas, Lockheed and Stanford. There are two variations. One involves putting frozen materials in a vacuum chamber where the vacuum is pulled low enough and fast enough that the physical change known as sublimation takes place. Ice crystals vaporize without melting and are collected and disposed of. In the second process, water is evaporated under pressure. Both processes take place in the presence of controlled heat.

Books may also be air-dried. In this instance they are stood on their heads (to avoid pulling on the weaker head end) on many layers of clean newsprint. As the books dry, pages are interleaved with white paper toweling or clean newsprint. This will help wick out the water. As the towel both underneath and inside becomes wet, it must be replaced by dry towels. If necessary, towels may be impregnated with thymol. Also the temperature and humidity in the drying area must be as low as possible, and air must be kept circulating by fans.

In spite of all care, mildew may develop. In that case fumigation is necessary to avoid destruction of the books as well as contamination of the collection. A local exterminator may be called in to fumigate an entire area or they may be able to fumigate a few books. Once infested by mildew, a book will always be more susceptible to it again, and bear stains all but impossible to remove.

Peter Waters, Preservation Officer at Library of Congress, has written an excellent booklet Procedures for the Salvage of Water-Damaged Library Materials. It is the best, short account of how to deal with wet materials, and should be required reading for all disaster planning efforts.

Handle wet items with extreme care as bindings will separate easily, paper tear, photographs stick, and art mediums blur. Do not attempt to separate stuck material. Support single items on dry, flat sheets of paper or card. Place all film, computer tapes or photographs in clean, cool water and get them to the nearest good photo-processing laboratory, notified in advance.
Once a wet area is cleared out, shelves, walls and floors must be scrubbed with a good disinfectant and fumigant. Thymol is ideal as is X-14, available in commercial amounts as well as spray bottles. Sometimes this is best done by a commercial firm as fumigants can be toxic.

B. Fire

Of course where there is fire there will also be water damage. And the advice given for dealing with water damage still applies.

Perhaps the first consideration is to prevent fire. Statistics about fires the last few years are sobering. Arson is the cause of 78% of all library fires; the crime of arson is up 70% since 1978; most library fires occur after hours in libraries. These facts give some clues for prevention. Public libraries are particularly susceptible to fires started in book drops; college and university libraries to fires started in stack areas. In addition, there are many documented instances of devastating fires caused by careless construction or repair workers. For instance, the Klein Law Library fire.

Older buildings with open stacks and stairways, lack of fire doors, poor ventilation and much wood are terribly susceptible to fire. New buildings, if carefully planned, are much safer. But any building which houses books will burn if any heat builds up. This has been demonstrated several times, including the famous Cornell test. Fire wreaks terrible damage. Not only do books burn, but high heat itself destroys paper, and smoke causes immense damage. (For a report on smoke damage, see the article "Fire" from the Library Association Record, September, 1978.) Fires are fed these days not only by wood, but by plastics, chemicals and acrylics, all of which give off toxic fumes and dense smoke. Often materials which don't burn are destroyed by smoke. Fire prevention include other obvious precautions such as prompt trash removal, strict smoking rules and control of flammable materials.

Libraries must also decide about sprinkler systems. There is no doubt that sprinkler heads can be knocked off or jammed with burning paper. Wire baskets can be installed over heads to protect against bumping or malicious damage. Sprinkler head mechanical failures do occur, but only once per one million installed heads.

There are many different kinds of fire protection systems available today ranging from the very sophisticated Halon system to carbon dioxide, foam, dry pipe and wet pipe kinds. No longer do all sprinklers automatically discharge in an area. Only one sprinkler may trigger and put out a small fire, then shut off after a pre-set, safe temperature is reached. If needed, the same sprinkler can turn on again. Depending upon the library and its materials, a decision can be made about the best fire protection. Included in protective measures are smoke alarms wired to the fire department. An occasional false alarm is worth the inconvenience when a small fire is caught before it does damage.

More and more, the decision about fire protection will be made for libraries. Recently, the University of California at Berkeley was threatened with cancellation of its insurance policy unless the main library was sprinklered. And there is a new law in Santa Clara County, California, where Stanford University is located, which makes sprinklers mandatory in a large, new library addition, even if administrators had chosen not to include them. (Local fire authorities are good resources for checking buildings for fire safety.)

The damage from fire, smoke, heat and water is so shocking and permanent, that all libraries should consider carefully when making a decision about fire protection. The thought that metal shelves can melt under heat, wall and roofs cave in, and 12,000 gallons of water a minute can be poured into a building must give pause when risks and costs are being considered. Two excellent resources to check in fire information and prevention are John Morris' Managing the Library Fire Risk and the ALA publication Protecting the Library and Its Resources.

C. Wind and Weather

I am going to group the final hazards together in considering disaster prevention: weather, wind (including tornadoes and hurricanes), and earthquakes. The approach to prevention is very basic. Again, know the weather hazards indigenous to your area. If high winds are a problem, have roofs checked more often than colleagues might who never see more than a gentle breeze. Obtain storm shutters. Know the proper procedures for saving buildings or reinforcing them in tornado country. Keep windows properly caulked, eaves cleaned, storm drains cleared out. If snows back up, plan for snow removal from flat roofs (or sloping ones) and the drains which carry away run-off. Check the feasibility of lightning rods or grounding wires. Have large trees trimmed or wired to avoid supporting
a mighty oak with your roof. If earthquakes are a potential hazard, consult engineers who can advise about shelving which will ride with mild shocks instead of tumbling in a domino effect or twisting rigidly. In earthquake country breakable material should not be placed on top shelves where it can pitch down. Sometimes elastic ropes stretched low across the fronts of shelves will hold phonograph records, rare books, and other valuable items in place at very little cost. When looking at a facility for damage prevention, thinking in terms of what is likely to happen will afford a sound approach to prevention.

In weather and wind protection a final suggestion; keep abreast of weather forecasts, especially in times of the year when hazards are prevalent. You won't be able to prevent that tornado, but having time to brace against it and putting a disaster team on alert will lessen the impact if it occurs.

II. Disaster Action

When planning for preventive measures or disaster action, the work is facilitated by a sound committee of people interested in the problem. The committee approach is typified by the fine plan, edited by Hilda Bohem, generated for the University of California system.

The committee should have authority to examine premises, call in experts for advice and consultation and make recommendations. On the other hand, the committee must feel an obligation to take into consideration particular restrictions, problems and realities in order that the finished document is sound and sensible for implementation. Sometimes a committee can generate support from a larger body itself. For instance, at Stanford we involved the plant services people who are responsible for all the buildings both before and after a disaster. They were eager to respond to emergencies in a faster, more organized way. Representatives from all the libraries met with the facilities staff to write an emergency document which would be satisfactory for buildings, people and collections. As a result, among other positive outcomes, we now have an emergency trailer outfitted to respond to library needs immediately with basic disaster supplies such as fans, pumps, a hydraulic jack, plastic sheeting, tarps, wet-dry vacuums, etc. In addition, we have a 24 hour trouble line for immediate emergency response for leaky pipes, broken mains, steam leaks, roof drips, and hotwires.

In a small library two or three people can plan according to simple needs. The idea is that the benefits of having a formal, written document indicates to administration, boards, fiscal bodies, insurance companies and the public that you have given thoughtful consideration to the welfare of the collection. You will be able to react in an intelligent, collected manner to emergencies, thereby reducing costs of time, material and staff. It is not until you are faced with 50,000 wet books or a smoldering library or three feet of filthy flood water that you truly understand the helpless feeling disaster conditions bring. Solid, detailed, pre-planning will prevent hasty and foolish action. The following list will detail some major points to consider when setting up emergency plans. (In addition, Pamela Darling's article "Call to Action — A Local Preservation Program" is full of sound advice.)

1. First, an emergency phone list of library personnel with current numbers is important. This list should be distributed to fire, police and administration. One person must be designated to receive the call, assess the problem, and instigate the phoning of others if necessary. If people are assigned "vital" jobs, they should also designate a back-up person.

2. Priority areas within libraries should be established so everyone knows which is to be saved first, second, etc. If that decision has to be made. These priorities should include also which materials can be abandoned if necessary when cleanup time comes. Remember to save the shelf list or catalog. A second copy off the premises is desirable.

3. Emergency procedures for dealing with fire, flood, bomb threats, tornadoes, etc. must be clearly understood by all staff.

4. Sources for emergency supplies should be located and contacted ahead of time in case of disaster. These might include: generators, pumps, trucks, forklifts, and pallet movers, freezer space, cartons and freezer wrap, fumigators, fans, dehumidifiers, sling psychrometer (for measuring temperatures and humidity), book carts or trucks.

5. A list of resource people such as plumbers, electricians and carpenters should be included.

6. Staff members should be knowledgeable about where to turn off electricity, water and gas.

7. Have a list of conservation experts to call upon for advice. Remember that Library of Congress has preservation experts available for emergency advice and consultation.

8. Have a small stockpile of emergency supplies on hand. Plastic sheets to throw over book cases or ranges may save precious volumes while pipes are being fixed. A wet-dry vacuum or mop-up equipment will prove invaluable. A roll or two of clean newsprint will offer opportunity to start air-drying a few wet books immediately.

Oklahoma Librarian, October, 1980, Vol. 30, No. 4 39
9. Fire extinguishers readily available and current are necessary. But having staff trained to use them, and to use them appropriately is important. Chemical extinguishers sprayed on book paper will destroy it quickly. Knowing what to do to keep fire isolated to one area until the fire department arrives may destroy one section but save the library.

10. Set up an accounting system with authorities so it can be put into play immediately. The lack of this in a large organization may cause time-consuming delays.

The second list brings cleanup plans into action. Now the really hard job begins. It is one which will challenge your skills and bring a great sense of satisfaction if you know in retrospect you have done the best you could under the circumstances.

1. First, don't make hasty and foolish decisions. Follow your plan, consult experts, proceed with deliberate haste.

2. Make sure the building is safe to enter. In case of standing water, be sure all electrical hazards are eliminated. Wet floors are very slippery, personnel should be warned. The fire department will always make the final decision on the safety of a burned building. Listen to them — don't assume in your anxiety that they are trying to slow you down.

3. Once in a disaster area, assess the damage as carefully and logically as possible. Have personnel who are familiar with the material assist. Take careful notes on the material as it is for insurance purposes as well as planning. Photographs are very helpful. Inform your insurance carrier.

4. After a first assessment, retreat to a quiet place to decide your plan of action. Contact experts who have had experience and ask advice after explaining the situation as carefully as possible.

5. In case of water and smoke, vent the building as soon as possible. It is imperative to bring down the temperature and humidity. Turn off all heat, and if possible turn on the ventilation system, even the air-conditioner. If need be, break out windows. Measure the temperature and humidity and keep track of it.

6. If parts of the building are safe, but a roof has been lost, cover material to avoid further damage from exposure.

7. If large amounts of material are wet, put your action plans into effect to get them to a freezer. This involves keeping records of material, handling all wet material with extreme care, loosely wrapping individual items so they won't stick to each other, boxing items one layer deep and spine down in boxes, and sending to a freezer facility where temperatures are at least -20°F. If material is floating in deep water, you may have to have the water pumped out first. As long as material is submerged there is much less danger of mildew. Therefore weigh how much you can handle at a time and leave the rest submerged until you can rescue it, but the quicker the better. Material coated with mud, slime or sewage can be rinsed very gently under cool running water before packing if necessary.

8. Material just slightly damp can be air-dried in a cool, dry facility. It should be stood on the head end with pages slightly fanned if possible. The surface of the table should be covered with clean layers of newsprint. As the book dries, the pages should be interleaved with newsprint or white paper towel. As the sheets become damp, they should be changed. Air should be kept circulating, the temperature and humidity as low as possible. Interleaving sheets may be impregnated with thymol if desirable.

9. In large areas where mildew appears, fumigation with thymol may be necessary. Call upon a professional to do this.

10. For single sheets, flat material, prints, etc., drying may take place flat and between blotters or several sheets of clean newsprint. Extreme care must be exercised with art prints to avoid destruction of the medium.

11. All film, slides, photographs, can be immersed in distilled water and sent immediately to the nearest photo-processing lab alerted ahead of time to the arrival.

12. Be careful about making on-the-spot decisions if it is not necessary. Your pre-plan should have helped you decide what material can be lost if it needs to be. Everything will tend to look impossible at this point, and material you may decide to discard as hopeless, will often be salvageable.

13. Burned and charred material requires special care in handling as the paper and bindings are very brittle. Support single sheets on cardboard and secure them with another sheet of heavy paper or cardboard on top. There are ways to remove the smell of smoke, the most effective is by using a vacuum chamber and ozone. Many times burned books are easier to replace than restore, but this depends on the kind of library and its materials. Perhaps having materials available for research use until new material can be brought is worth saving much in spite of obvious drawbacks.

14. Once material is frozen, it can stay that way for a long time. This gives you a chance to consider various alternatives for recovery. Even if air-drying is decided upon, freezing material allows
you to dry what you can handle at one time without being overwhelmed. And freezing at extremely low temperatures offers the added advantage of drying out material in the freezer while it sits there.

15. If you are missing a roof, walls or doors, arrange for security. Also put into effect your plans for moving out everything, re-roofing, or whatever is appropriate.


17. All floors, shelves and surfaces touched by water and/or smoke must be thoroughly scrubbed. This should be done with a formalin solution or other mold inhibitor like thymol dissolved in methylated spirits. Care must be exercised in their use.

18. Large masses of frozen books can be dried successfully by the vacuum process. In one process, the ice is sublimated (vaporized without first melting) and collected on a panel to be drained off after a load is done. In another process, the water is evaporated under pressure and drawn off. These successful methods have been described by Comin Glass, Stanford University, McDonnell Douglas, General Electric and Lockheed. (George and Dorothy Cunha’s book Conservation of Library Materials is a helpful resource.)

Finally, a solid restoration effort can be accomplished no matter how hopeless the situation looks at first. Sometimes much material will be saved, and sometimes less. But people will respond to your needs with innovation, skills and dedication. If certain methods seem not to work, others will. Jean Monnet once wrote:

I am not an optimist.
I am merely persistent.
If action is necessary
how can one say that
it is impossible, so
long as one has not
tried it?

Prevent disaster if at all possible. But plan for it in case it does happen. Then follow your plan, ask for help, and coping will be less difficult.

Bibliography


Colloquium on Preservation Planning Committee

Marcia M. Goodman, History of Science Librarian, The University of Oklahoma Libraries, Chair.
Jo Ellen Herstand, Interlibrary Loan Librarian, The University of Oklahoma Libraries.
Nancy Larsen, Managing Editor, Readex Microprint Corporation.

Bernice C. McKibben, Assistant Professor of Library Science, School of Library Science, The University of Oklahoma.
Marietta Malzer, Head Archivist, Archives and Records Division, Oklahoma Department of Libraries.
Ruth W. Wender, Assistant Library Director, Special Services, The University of Oklahoma Health Sciences Center Library.
Suppose that we had Wells’ Time Machine and were able to move ahead to say, the year 3000. From this vantage point, if we looked backwards in time, we would find, I believe, that the print on paper era occupies a relatively brief period in the long history of human communication, a period, in fact, of not much more than 500 years.

There is reason to believe that we are now evolving from a print on paper based society to an electronic society. The signs of this evolution are all around us. We see online terminals in use in the airline industry, in banks and in supermarkets. In industry, we are beginning to see the emergence of the paperless office and of electronic mail systems. Computer conferencing is no longer a toy; it is being used by electronic ‘invisible colleges’, to exchange information, to collaborate on research projects, and to produce new publications. Domestic television sets are already being used as online terminals capable of delivering textual information on demand. Moreover, the home computer has arrived and is beginning to make its presence felt.

Computers have also been applied in libraries: in acquisitions, circulation, serials control, production of catalog cards, and inter-library loan. Some libraries are now beginning to substitute online terminals for the traditional card catalog. In the last decade, online systems have been extensively applied to the searching of data bases, both bibliographic and nonbibliographic. Online literature searching is increasing rapidly in volume, in spread, with one new data base following on the heels of another, and in sphere of influence. Clearly, there is still a tremendous growth potential in this particular application, including growth of international dimensions. It seems entirely possible that SCANNET and EURONET will be followed by similar networks in South and Central America, in Asia, in Africa and in Australasia.

So far, apart from the field of law, the application of computers to libraries and other information services has been largely restricted to the manipulation of machine readable records representing physical artifacts. The artifacts thus represented — books, periodical articles, patents, dissertations and technical reports — still exist in print on paper form.

Significant progress has been made in the application of computers to publishing. This application is still mostly confined to the production of publications; as yet, little application to their distribution has occurred.

Computers are used to produce publications that are then distributed as print on paper through the mails. It seems reasonable to suppose, however, that the publishing industry is evolving from one based on print on paper to one that will be completely electronic, with publications produced and distributed in electronic form.

At present, we seem to be in a transitional phase in this normal evolutionary process. The period of transition has several fairly obvious characteristics:

1. Computers are used to print on paper. The publications thus created are still distributed by conventional methods.

2. Machine readable data bases exist side by side with their paper equivalents. The former have not yet begun to replace the latter.

3. New data bases and data banks, for which there are no paper equivalents, emerge. These new publications can be considered the reference “books” of the age of electronics.

4. Users of most online systems have not yet learned to do without the “crutch” of paper. Even chronic computer conferencing junkies (they do exist!) will still generate paper copy on occasions. This is not true, however, of the field of computer-aided instruction (CAI), where users get on very well without any paper output.

There is little doubt in my mind that the publishing industry will pass out of this transitional phase into a completely electronic mode of business. Many new “electronic only” publications will appear and will compete in the marketplace with publications in paper form. At the same time, I
believe we will see the gradual replacement of many existing paper publications by their machine-readable equivalents. The transition, then, is from publication in paper form only to dual mode publishing to completely electronic publication and distribution. In the field of secondary publication (i.e., the production of indexing and abstracting services) the dual mode phase was reached some time ago. It seems likely, then, that these publications will also be the first to disappear in paper form. I expect the same developments to occur, some years later, in the field of primary publication, with journals and many types of "books" available in paper and in electronic form, and the paper versions eventually giving way to electronic access. The "eventually" here may not be as far off as many suppose. Indeed, I suspect that paper publications could substantially have disappeared by the end of this century, a mere 20 years from now.

In electronic publishing itself, it may be that two distinct phases will occur. In the first phase, electronic publications will look very much like the print on paper they replace. They will be existing publications received and displayed on terminals. Later, however, the true primary publication (i.e., the production of indexing and abstracting services) the dual mode phase was reached some time ago. It seems likely, then, that these publications will also be the first to disappear in paper form. I expect the same developments to occur, some years later, in the field of primary publication, with journals and many types of "books" available in paper and in electronic form, and the paper versions eventually giving way to electronic access. The "eventually" here may not be as far off as many suppose. Indeed, I suspect that paper publications could substantially have disappeared by the end of this century, a mere 20 years from now.

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Developments in the application of computers to publishing, in electronic mail and the paperless office, in computer conferencing, in teletext, Viewdata, and other manifestations of interactive television, allow us to conceive of a paperless information system of the future, of the year 2001. In this system, professionals in all fields of human activity will use electronic communication and storage in place of the generation, transmission, storage and destruction of billions of pieces of paper.

In this communication system, the online terminal will be pervasive. The distinction between formal and informal channels of communication will tend to disappear since both forms of communications will take place through use of online networks. The relationship between formal and informal communication will be much more symbiotic than it is today.

We can best appreciate the capabilities of this system by focusing on one hypothetical user. Our hypothetical user is a research scientist. We will call him George.

George has a video terminal in his office and another in his home. He also has a portable terminal that he takes with him wherever he travels. In point of fact, however, he does much less travelling, except for purely recreational reasons, than the scientist of today. He visits the university only when he needs physical access to his laboratory. Otherwise he does most of his work at home, communicating with his colleagues, his laboratory assistants and even his assistants and even his students mostly through computer conferencing.

George maintains his calendar in electronic form. It is the first thing he consults when he logs onto his terminal in the morning. After his calendar, he consults his electronic mail, which falls into three categories: personal messages, messages directed to all members of the research groups to which he belongs (his electronic invisible colleges), and notification of new publications that match his stored interests profile (he belongs to several SDI services that match his interest profile directly against the characteristics of newly published primary literature). Some of the mail he responds to immediately. Other items are discarded and yet others stored for future action.

George belongs to a very wide network of colleagues, working in the same research area as himself; he communicates regularly with about 20 scientists in five countries and less regularly with many others. Altogether, he maintains direct contacts with scientists in 18 different countries.

George’s laboratory notebooks, along with many other personal information files, are stored electronically. They are also built electronically since he has long since come to regard his terminal as an electronic notebook. He writes at his terminal, reports as well as letters, drawing freely and easily from text and other data in his electronic files. He exchanges drafts of future publications with some of his closer colleagues, inviting their comments. This merely involves sending the same messages simultaneously to all of these colleagues. The message includes directions on how his draft can be accessed.

When he is ready to disseminate his work to a wider audience, he submits his article to the editor of an electronic journal. He usually knows which journal to submit to. Sometimes, however, he needs to consult online directories that match the characteristics of his publication with statements of scope of electronic journals.

All communication among author, editor and referees is electronic. This communication is rapid and needed changes are very easily made. George no longer subscribes to any journals. Instead, his interest profile is regularly matched against the characteristics of contributions made to a very wide range of electronic journals. In this way, he is able to keep up with new developments, in his immediate field and in peripheral areas, reflected in contributions made to several thousand journals worldwide. Notifications of new articles matching his interest profile are received a few days after these articles are accepted into electronic journals. By 2001, the use of secondary publications as a means of accessing primary publications has been completely bypassed for current awareness purposes.

The notifications provided by the SDI services consist of bibliographic citations plus abstracts. The full text of all articles, patents and other forms can be accessed online through a network of online service centers. All items have a unique electronic address which is carried in the SDI notifications. George pays a rather small annual fee for this SDI service, and he is automatically billed for royalties to publishers when he requests access to the complete text of any publication. Twenty years earlier, he subscribed to five professional journals, the only ones he regularly scanned. These journals were not only expensive; they were not cost-effective. Much of what he paid for was not directly related to his interests. On the other hand, he missed many highly relevant papers in other journals that he did not regularly see, only finding out about these papers very much later through the use of secondary services. Now, in 2001, he finds himself in effect scanning the contents of several thousand journals. Moreover, he pays only for what he uses.

The most relevant articles George receives are added to his own personal electronic files in much the same way that he used to file preprints and reprints. His electronic library, however, is...
orders of magnitude more efficient. He can index a publication in any way he wishes and with many different terms, freeing himself from his former pigeonholing folders. Moreover, he also has the ability to search on keywords in titles and abstracts. He can also annotate his stored text and, if he wishes, enter comments on the articles he reads into public comment files, accessible to other readers. He regards this “public refereeing” feature as one of the major advantages of electronic publishing.

When he needs a specific item of information, to make a decision or solve a problem, George finds a vast array of resources accessible through his terminal. The same terminal gives him access to his own files, to departmental files, to university resources and to a multitude of outside data bases. Frequently, he will conduct his own searches. On other occasions, especially in somewhat less familiar subject areas, he will delegate the search to a professional information specialist. These information specialists, identifiable through online directories, will provide a complete literature searching service, delivering text and other data to George’s terminal after they have completed their search, evaluation and synthesis functions. When he needs to consult an expert in an unfamiliar field, George uses online directories to identify an appropriate individual and to find his or her address on the network.

Libraries and Librarians

If the developments I have forecast come to pass (which they will in substance if not in exact detail), it is clear that great changes must also occur in the library profession. It is my belief that, in an age of electronics, the library as a collection of physical artifacts will decline substantially in importance. The librarian, on the other hand, could gain substantially in importance, in status and in recognition. The electronic librarian will be a valued and, indeed, indispensable information consultant and guide to information resources in electronic form.

The major characteristic of the library profession in the period of transition from print on paper to electronics can best be summed up in a single word “de-institutionalization”, although “de-institutionalization and re-institutionalization” may perhaps be more accurate. As more and more information resources become accessible online, the character of librarianship must change in two important respects. First, it will make no sense to view the collection of a library as merely that set of publications contained within its four walls. If a remote data base is regularly used to provide information services to library patrons, that data base is as much a part of the collection as one purchased and stored in paper form. By the same token, it is only sensible that the catalog of the library should contain entries for information sources that are accessible in electronic form as well as for those stored locally in paper form. Eventually, of course, the electronically accessible sources will become more important than those stored locally on paper. What I am suggesting, in fact, is that libraries, viewed as collections of physical artifacts, will dwindle in size (perhaps an impolite remark to make on the occasion of the opening of a new library building!). At the same time, library catalogs will grow rapidly (conceptually but not physically) because they will contain pointers to a vast array of publications that can be accessed through electronic networks. In the age of electronics, then, libraries and their catalogs can be considered deinstitutionalized.

The second major change concerns the librarian. Clearly, if libraries themselves become deinstitutionalized, so must the librarian. In fact, with the information resources already available online, the literature searching function of libraries could even now be performed outside the library. When the major reference tools (bibliographies, yearbooks, handbooks, directories, dictionaries, concordances, encyclopedias) become accessible online, the question-answering function of libraries could also pass from the library as an institution. The librarians of the electronic age do not need to work within a library. They could perform their major professional functions in support of research from an office or, indeed, from the home.

I believe that, in the early years of the transition from a paperbound society to one that is electronics-bound, research libraries will still be places that people visit for access to information resources. In addition to their print on paper resources, these libraries will provide the terminals needed to access the electronic resources. More importantly, they will provide the expertise needed to exploit these resources effectively.

Later in the transition, as the electronic sources continue to gain in importance, and the paper sources decline, as terminals become more common in offices and in homes, and as individual researchers become familiar and comfortable with the use of online data bases, the need for these researchers to visit libraries will rapidly diminish. When this occurs, the library as an institution will begin its inevitable decline.
Clearly, technical services will dwindle rapidly: electronic sources do not need to be selected, acquired, cataloged (at least by individual libraries), prepared for the shelf, or bound. But public services within the library can also be expected to decline. When terminals become widely available, potential users need not come to the library to consult information sources or even to consult professional information specialists. Moreover, since the complete text of research materials will be accessible through terminals, there will be no need to visit a library to borrow such materials and interlibrary loan activity will be restricted to the older materials that are available only in paper form.

(Parenthetically I should say that nonresearch libraries and non-research functions of libraries will be affected much less by the transition to electronics since I suspect that literature read for relaxation or inspiration is unlikely to be enhanced by display at a terminal and will continue to be available in printed book form).

Although it may sound paradoxical, I believe that the future of those librarians who support research activities, in academia, in industry and elsewhere, depends on their ability and willingness to get out of the library. As I have said before, the librarian of the electronic age does not need to function within a library. In the past several years some de-institutionalization has occurred. Examples include the completely freelance librarian, companies offering an “information broker” function, and librarians participating as integral components of health care teams. I expect that this trend will continue, at a greatly accelerated pace, as we move further into the electronic age.

Rapid growth of information resources in electronic form may greatly reduce the value of the library but it may greatly increase the value of the librarian. The magnitude and diversity of the electronic resources available will place skilled information specialists in great demand. Those information specialists will be needed to:

1) Act as information consultants, pointing people in the direction of sources that are most appropriate in solving particular information needs.
2) Train people in the use of electronic information sources
3) Search sources that are unfamiliar to particular users.
4) Provide an “information analysis” function — synthesizing the results of searches in several sources and presenting evaluated and selective results to the researcher.
5) Assist in the construction of effective user interest profiles for use with online SDI facilities.
6) Assist in the organization of personal electronic information files.
7) Keep researchers up to date in new information sources and services as these become available.

These will all be important activities in the electronic age but none of these need be performed within a library. Indeed, it is highly desirable that the librarian of the future should get out of the library and work more closely with those individuals who need help with their information problems. Thus, I hope and expect to see the re-institutionalization process alluded to earlier, with librarians affiliated directly with academic departments, working as equal members of research teams in academia, in health care, in industry, and elsewhere. I also expect to see the appearance of greatly increasing numbers of freelance librarians although, rather than working completely independently, they are perhaps more likely to form small group practices somewhat resembling our present group practices in medicine and in law.

Future librarians (perhaps, once they leave the library they should be given a new name) are likely to have responsibilities far beyond those they have at present. For example, in commerce and industry these information professionals may have control over the organization of the company’s own electronic files, including the electronic mail files.

It is my belief that, in the long run, the process of de-institutionalization/re-institutionalization will be very beneficial to the profession. The librarian of the electronic age could become a valued professional colleague of chemists, physicists, physicians, attorneys, educators, and other professionals. The profession has been institutionalized far too long. In the eyes of the public, a librarian is “someone who works in a library” and librarianship is “what goes on in a library.” Unfortunately, since many of the most visible activities of libraries tend to be routine and clerical, it is difficult for the public to recognize that the professional librarian performs tasks that require considerable education, training, experience, and problem solving/decision making abilities.

The de-institutionalization process of the electronic age, by focusing on the information professional as an expert in a technical field, rather than on the institution in which he or she operates, could greatly improve the librarian’s image, status and (dare we hope?) rate of compensation. The library is dead. Long live the librarian!
School Librarians Meet

The 1980 OASLMS/OEA fall meeting was held in the east pod at Putnam City West High School, 8500 N.W. 23rd, Oklahoma City, Friday, October 17 at 10:00 a.m. All Oklahoma School Library Media Specialists were encouraged to attend.

Speaker for the meeting was James L. Thomas, EdD, an assistant professor at North Texas State University in Denton, Texas. In his program, "Using periodicals in School Library Media Centers: Resources and Activities," Dr. Thomas presented an update of new selection and evaluation tools, indexes, professional publications and periodicals in special formats for handicapped users. The workshop also consisted of suggestions for activities appropriate for use with children and young adults to stimulate more awareness and interest in the school library media center's periodical collection, plus time to examine the materials covered.

This was the second year for OASLMS to honor an Oklahoma School administrator for the promotion of school library media services. Presentation of the award was made Thursday, Oct. 16, at 9:30 a.m. in the Lincoln Plaza Gold Room.

LITERARY NOTES

By Judith Ann Walden

Two Oklahomans, photographer David Fitzgerald and noted writer Bill Burchardt, have teamed up to produce a magnificent photographic tribute to our State in Oklahoma, Graphic Arts Center Publishing Co., 1980 ($27.50). Fitzgerald traveled over 24,000 miles within the state taking thousands of photographs. 150 of them are included as color plates in this 10 1/2 by 13 1/2 tome. The work is concluded with a historical summary of Oklahoma from its prehistoric past to its present.

Two more volumes are available in the Oklahoma Series published by the Oklahoma Historical Society. Cities of Oklahoma, volume XI, 1979 ($12.75, paper $8.25) is edited by noted geographer and historian John W. Morris and includes nine chapters about urban Oklahoma, with historians of various areas of the state writing the history of those regions. Volume XII is Will Rogers: A Centennial Tribute, 1979 ($12.75, paper $8.25) edited by historian Dr. Arrell M. Gibson. This book is a collection of memorial essays, analytical chapters on Roger's influence on the cowboy image as well as his role as social critic, and thirty-eight photographs.

The second book in the new Oklahoma Horizons Series, sponsored by the Oklahoma Heritage Association, is an Oklahoma Adventure: Of Bankers and Bankers by James M. Smallwood, University of Oklahoma Press, 1979 ($3.75). This series will include books about Oklahoma institutions and organizations that have had a marked influence on the educational, cultural and economic life of the state.
Now Upon a Time: A Look at the Curriculum Materials Laboratory at OSU

Anne K. Hoyt
Director of Curriculum Materials Laboratory and
Associate Professor, Department of Curriculum and Instruction
Oklahoma State University

Carolyn J. Bauer
Associate Professor, Department of Curriculum and Instruction
Oklahoma State University

The Curriculum Materials Laboratory (CML), a department of the Edmon Low Library on the Oklahoma State University campus in Stillwater, provides an excellent special collection for those interested in children's literature, reading and curriculum materials for elementary and secondary schools. The CML is a collection of selected, classified, and catalogued school library materials, grades K-12; representative elementary and secondary textbooks; courses of study, teaching aids, bibliographical tools and resource guides for those interested in children's literature, reading and curriculum materials.

Well into its third decade of service, the CML grew out of a dream of Della Thomas and Edmon Low. They envisioned a center which would serve as a laboratory for both teachers and librarians-in-training; would provide teachers with materials at pupil-levels for planning lessons in an enriched curriculum and give librarians practice in using and promoting the many indexes and guides to both book and non-book materials. At first a glassed enclosure in the Education Area on the fourth floor, it moved to larger quarters in the early '60's. Later under the leadership of Dr. Roscoe Rouse, Neysa Eberhard and Anne K. Hoyt the collection continued to grow in that location on the fifth floor.

The school library collection has approximately 30,000 titles including recommended non-fiction selected with the particular needs of school curricula in mind as well as fiction exemplifying the best of classic and current literature. Emphasis on distinguished book illustration is evident in a large picture book selection. Other special collections include children's books in foreign languages, Newbery, Caldecott and Sequoyah award books, Indians of North America and recommended juvenile paperbacks.

Textbooks are provided by publishers for review purposes. Students enrolled in methods courses may examine and compare their effectiveness, or use units of study as a basis for preparing bibliographies of books and materials for given subjects and grade levels.

The periodical collection includes children's magazines and all of the standard reviewing periodicals. It also contains journals for the study of children's literature, such as Phaedrus, Bookbird, The Lion and the Unicorn, Children's Literature in Education, Children's Literature Abstracts, and Curriculum Review. All are listed in the Oklahoma Union List of Serials.

Bibliographical and resource guides include the general selection aids and specialized volumes such as Subject Index to Children's Magazines, NICEM Indexes, Media Review Digest, and Lander's Film Reviews, poetry indexes, guides to audiovisual materials and annual lists of free and inexpensive teaching materials.

Several vertical files provide a variety of material for the teacher education program. Located adjacent to the book area is the Listening-Viewing Room where samples of such materials as disc and tape recordings, filmstrips, filmloops, kits, games, maps, posters, study prints, slides, films, transparencies and tapes are available.

While the Laboratory serves the teacher education division, it also provides resources for a wide range of scholarly study in the field of children's literature. In addition to trade books there are holdings of general and specialized reference and bibliographical tools, and biographical materials. The Rosenbach collection of early American children's books was purchased as microfiche and Garland Publishing Company's series Classics of Children's Literature is available in facsimile reprints for the retrospective study of children's literature. Recommended lists of children's books reflect-
FEDERAL RELATIONS
COORDINATOR REPORT
August 15, 1980

Carol Henderson reported that Congress is out for the Democratic Convention so nothing much is happening.

Re: Elementary and Secondary Education Act Title IV-B. The regulations had been disapproved but the Secretary of Education has written to Congress that she plans to revise the rules — physical education equipment would not be eligible.

No other activity reported.

Submitted by Esther Mae Henke

OLA President, Aarone Corwin, hands a check in the amount of $1,975.00 to Ms. Marilyn Staats OK-ERA Chairperson. The money which was made available from the American Library Association E.R.A. Task Force, will be utilized to help maintain the operation of the state office for one month.

Oklahoma legislators will have only one more opportunity to approve the ratification of this amendment before the 1982 deadline. If you would like to help call the OK-ERA office; 400 NW 23rd St.; Oklahoma City, OK (405) 525-5400.
OKLAHOMA LIBRARY ASSOCIATION
BYLAWS

ARTICLE I: FISCAL PERIOD

The fiscal period of the Oklahoma Library Association shall be July 1 to June 30 of the next year.

ARTICLE II: DUES AND FEES

Section 1. All dues are annual and payable by July 1 each year. Delinquent members shall be notified once in writing not later than July 15, and if dues are not paid by August 31, they shall be dropped from the roster as active members.

Section 2. Personal memberships.

A. Personal membership dues for membership in the Oklahoma Library Association shall be the amount listed hereafter and based on the applicant's present annual salary. Dues shall include membership in one free division of the applicant's choice. The salary schedule is as follows:

1. Librarian members
   Salary up to $4,999 ................................................................. $10.00
   Salary $5,000 to $9,999 .............................................................. $15.00
   Salary $10,000 to $14,999 ......................................................... $20.00
   Salary $15,000 to $19,999 ......................................................... $25.00
   Salary $20,000 and above ......................................................... $30.00
   Additional division and/or roundtable memberships each ............... $1.00

2. Full-time student ................................................................. $5.00

3. Trustees, Lay members, and Friends ........................................ $10.00

B. Life members shall be assessed no dues but shall have all the rights and privileges of personal members.

Section 3. Institution memberships

Dues for library institutions shall be the amount listed hereafter based on the total annual income of the previous fiscal period:

1. Libraries
   Income up to $50,000 ................................................................ $15.00
   Income $50,000 to $99,999 ......................................................... $30.00
   Income $100,000 to $999,999 ...................................................... $60.00
   Income $1,000,000 and above .................................................... $75.00
   *Includes one free individual (#3) membership

2. Non-library association, institutions, or organizations ................ $10.00

Section 4. Only persons holding personal membership in good standing shall be entitled to vote at all membership meetings.
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