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Preserving Newspapers: National and International Cooperative Efforts

INTRODUCTION

A newspaper, as defined by the United States Newspaper Program, is “a serial publication which is designed to be a primary source of written information on current events connected with public affairs, either local, national and/or international in scope” (Harriman, 1984, p. 2). In short, a newspaper is printed, appears at regular and frequent intervals, and concentrates on current events. The evolution of the newspaper is closely related to the development of print, which enabled people to communicate news and views far more widely than was possible in manuscript form. Because of this ability, newspapers have been, and are, controversial; the power of the press is a force to be reckoned with, if not feared. The newspaper is not a passive entity; it is at the center of a vortex of activity. It is also ephemeral, in that it is purchased, read, and disposed of within the course of a day. Because newspapers are ephemeral, many scholars have discounted their usefulness, failing to recognize that “the very unreliability of the newspaper is an important record of its environment. Newspapers not only record events with unique immediacy and impact, but they also preserve sociocultural attitudes and biases in their historical context” (Mills, 1981, p. 464). In his keynote address at the International Symposium on Newspaper Preservation and Access held in London in 1987, Sir Denis Hamilton, former Editor-in-Chief of the *London Times*, observed that the elite papers of the world are courageous because they present news and views and do not bow to public opinion (Hamilton, 1988, pp. 13-19).

Historians have always turned to newspapers to see how events were interpreted at the time that they occurred. Now, more than ever,

with an increased interest in social history and in the daily life of the common person, historians have come to appreciate and use this most important element of the historical record. Thus, the questions of preservation and access have become more critical. As preservation and access are achieved, scholars are able to increase their study of people and events through an examination of the primary source of information and observation: the newspaper.

THE PROBLEM OF PRESERVATION AND ACCESS

Until a little over a hundred years ago, most newspapers published in the United States and around the world were printed on rag fiber paper; those that have survived the ravages of humans can survive for generations to come. The Industrial Revolution of the nineteenth century brought increasing literacy and an increasingly sophisticated technology for the production of paper and for printing. By the late 1860s, rag fiber was no longer used exclusively for the production of newspapers but was mixed with other chemically treated fibers of straw and ground wood. The use of untreated ground wood pulp, containing lignin, the intrinsic enemy of paper, and alum rosin sizing, which was highly acidic, for the production of inexpensive paper to be used for the publication of newspapers and "mass market" books was common practice in the United States and Europe by the 1880s. This paper is especially susceptible to heat, humidity, and light, which cause a catalytic effect that essentially causes the paper to devour itself—to disintegrate. It is ironic that one of the first historians to accept newspapers as a historical resource was John Bach McMaster (1892), whose text, *A History of the People of the United States*, was undertaken at precisely the period when the source material itself was of such poor quality that its survival for even a generation was questionable (Mills, 1981, p. 464).

By the turn of the century, the few librarians and archivists who attempted to collect and maintain newspaper files realized the impermanence of this material. As early as 1897, the Librarian of Congress recognized the problem and recommended that publishers be required to print some rag copies for library deposit as part of the copyright regulations (p. 467). Although binding and wrapping newspapers in acidic paper and storing them in darkened areas offered some protection from the ravages of temperature, humidity, and light, it was evident that some newspapers had deteriorated beyond use within a few years of their publication. Frank P. Hill, Librarian of the Brooklyn Public Library, addressed the American Library Association on the subject at its 1910 conference. His talk prompted the Association to appoint a

special committee to study the problem and investigate possible solutions (Hill, 1910, pp. 299-301). By 1927, the *New York Times* began to print rag paper editions for libraries, and several other newspapers followed suit, but the practice ended with the advent of World War II and the shortage of paper (Mills, 1981, p. 467).

By the early 1930s, the U.S. government recognized the problem of rapidly deteriorating newspapers. An examination of newspapers published in the United States from 1830 to 1900 was undertaken by B. W. Scribner (1934) at the National Bureau of Standards. His investigation documented the shift in the manufacture of newsprint paper from rag fibers to untreated groundwood pulp, and his report offered suggestions for the preservation of newspapers through lamination with Japanese tissue or cellulose acetate sheeting. Although these lamination processes have not proven to be very successful, demonstrating yet again the need for caution when approaching any treatment technique that promises to be *the* solution to the problem of embrittled materials, a number of his comments in the report are prescient. For example, he pointed out that "reproduction in miniature appears to be the ideal means of preserving newspaper records" (p. 10). In conclusion, Scribner observed,

It is recommended that a coordinated effort be instituted at once by library and scientific organizations to find the most practicable means for the perpetual preservation of the newspaper records; that the perfection of materials and methods for reproduction in miniature be given primary consideration; and that consideration be given to a central agency for supplying reproductions of newspapers and other records to libraries. . . . (p. 10)

Microphotography has indeed proven to be the key to the preservation and access of newspapers, but its development for preservation purposes has been slow. The process was developed in 1850; the first newspaper was reduced to film three years later—the *London Evening News*, microfilmed to demonstrate the process (Mills, 1981, pp. 468, 483). However, the first commercially used automatic microfilming machine, marketed by the Recordak Corporation (a division of Eastman Kodak), was not available until 1928. Although it was developed for the filming of records, newspaper librarians recognized its application for newspaper microfilming and approached Eastman Kodak. The process was tested at the New York Public Library in 1933. In 1934, the Recordak Corporation introduced a fast and efficient camera and the first commercial microfilm reader. By 1935, the New York Public Library had begun to film its back files and the *New York Herald-Tribune* began the current filming of its files. Within three years, eight other newspapers had followed suit (p. 468).

The Library of Congress established its photoduplication service in

1938; by 1942, the service oversaw a full-fledged newspaper preservation program which eventually became self-supporting. Keyes Metcalf, who had been instrumental in developing the New York Public Library newspaper microfilming program, became the Director of Harvard University Library in 1937 and initiated a foreign newspaper microfilming program there which sold copies to about thirty other institutions. Microfilming, however, was not widely accepted; a survey of 112 libraries undertaken in 1940 found that only one institution had converted from the binding of newspapers to microfilm, in spite of the fact that most newspaper publishers left little margin for binding and that a bound newspaper volume was bulky and unwieldy (Jacobus, 1948, p. 295).

Following World War II, the library community again addressed the problem of newspaper preservation. In 1947, the Association of Research Libraries (ARL) formed a Committee on Microfilming Cooperation; it focused its attention on newspapers, where the need was most urgent. In 1948, it produced *Newspapers on Microfilm: A Union Checklist*, published by the Library of Congress, which established a Microfilming Clearing House the following year. T. F. Mills (1981) observes, "By 1950, a full century after the invention of microfilm and after nearly two decades of pioneering efforts and publicity, the medium had become the accepted method for preserving newspapers" (pp. 469-470). In 1952, the American Library Association established a Committee on Cooperative Microfilming Projects, making its first priority the microfilming of newspapers. ARL recognized the limitations of the Harvard effort to film and market foreign newspapers and established the Foreign Newspaper Microfilm Project in 1956. Administered by the Center for Research Libraries, the Project took over the housing of Harvard's master negatives and began to film a hundred current titles. In recent years, the Foreign Newspaper Microfilm Project has turned its attention to the problem of retrospective files of foreign newspapers.

With the proliferation of newspaper microfilming projects, there was a decline in the quality of the microfilming. Problems included high reduction ratios and uneven lighting, inadequate preparation of original materials, careless filming (a major research library discovered a roll of filmed material with a hand placed in the center of each frame), and the filming of incomplete files when complete files were available elsewhere. In 1951, the American Library Association's Committee on Photoduplication emphasized the need to maintain quality standards for newspaper microfilming, but it was not until 1972 that the *Specification for the Microfilming of Newspapers in the Library of Congress* was published, following a decade of efforts that had been undertaken with greater or lesser success. The haphazard nature of preservation microfilming being

undertaken by institutions throughout the country was, and is, of serious concern to librarians, archivists, and historians.

By 1978, there were over 70,000 American and foreign newspapers known to be preserved in microform in the United States (Mills, 1981, p. 472). It took forty years to achieve that total, yet little more than a quarter of the estimated 250,000 titles published in the United States alone had been microfilmed. It was evident that accelerated efforts were urgently needed if thousands of newspapers were not to be forever lost in the following forty years. The effort needed coordination to ensure that filming would be undertaken in a systematic way, that there would be adequate bibliographic control, and that the filming would be of standard quality.

THE UNITED STATES NEWSPAPER PROJECT

By the 1960s, historians and researchers increasingly expressed concern about the inadequacy of guides to newspaper resources and the deplorable state of such resources when they were located. In 1965, a Joint Committee on Bibliographical Services to History, consisting of representatives from historical associations, libraries, historical journals, and bibliographers, was established to address these problems. The deficiencies in Winifred Gregory's (1937) *American Newspapers, 1821-1936: A Union List of Files Available in the United States and Canada* were reported at the committee's Belmont Conference in 1967; a revision of the list was identified as a priority by the Organization of American Historians (OAH). In 1971, the American Council of Learned Societies (ACLS), at the behest of the National Endowment for the Humanities (NEH), polled its membership to identify the most needed program for the preservation of research tools for scholars. OAH recommended a program to organize, preserve, and make available United States newspaper resources (Woods, 1988, pp. 4-5).

OAH received a two-year grant from NEH to conduct a survey to determine the need for a revision of Gregory and the problems associated with such a project. The results of the survey demonstrated that there was, indeed, a universal need for a revision of Gregory, and that working on a state-by-state basis through a single statewide coordinator was the most logical way to proceed, as a large percentage of newspapers were found only in the state of their origin. Most important, this survey showed what a massive undertaking such a project would be (p. 4). NEH recognized early on that libraries would play an important role in such a project. The development of the MARC (Machine-Readable Cataloging) format in the late 1960s and the establishment of the Online

Computer Library Center (OCLC) in the early 1970s provided the technical facility for the development of a national newspaper database. The CONSER (Cooperative ONLINE SERIALS) Program, begun in 1976, provided the bibliographic standards, quality control, and coordination necessary for such an undertaking. The Library of Congress began to catalog its newspaper collection in 1974 and began to incorporate these records into the CONSER database by 1975. However, newspaper records have special requirements. It was clear that the task of providing bibliographic control of newspapers was beyond that which the Library of Congress could accomplish alone.

In 1976, OAH established an office at its headquarters to implement a two-year pilot project in Iowa to "test the feasibility of operating in a state and to explore the use of computerized records" (Field, 1988, p. 8). The Iowa Project underscored the need for accurate information on the extent and quality of previous bibliographic efforts (Model, 1978). By 1978, NEH was persuaded that a long-term program, to last a decade or more to assure the preservation and access of all United States newspapers, would succeed. NEH became the coordinator of the program, a role "extraordinary for the Endowment, a body used to funding projects rather than organizing and providing ongoing management" (Sullivan, 1986, pp. 159-160). The United States Newspaper Program was formally established in 1982. Its guidelines for the project, *Procedures and Standards for U.S. Newspaper Projects*, was issued in 1985. This is

a coordinated national effort to identify, to preserve, and to make available to researchers a significant portion of the newspapers published in this country since the seventeenth century. The projects are carried out on a state-by-state basis (including the U.S. territories) and in national repositories, such as the American Antiquarian Society and the New York Public Library, which hold titles from nearly all fifty states. (Field, 1986, p. 5)

In the fall of 1982, NEH awarded six grants to national repositories of newspapers, including the American Antiquarian Society, the Center for Research Libraries, the Kansas State Historical Society, the New York Historical Society, the State Historical Society of Wisconsin, and the Western Reserve Historical Society, to provide the initial database. Shortly thereafter, Rutgers University and the New York Public Library were added to the group; both institutions had achieved substantial control over their holdings, which were national (even international) in scope. By May 1983, sixteen planning grants were awarded, and full cataloging grants were awarded to Montana and the Virgin Islands (Sullivan, 1986, p. 160).

Today, the United States Newspaper Program (USNP) funds state-wide projects to survey newspaper repositories and to assess the status

of bibliographic control and preservation of the collections. Newspaper repositories, including libraries, archives, historical societies, even private collections, are inventoried and unique titles are cataloged according to the *Newspaper Cataloguing Manual* (Harriman, 1984). The physical condition of each file of newspapers is reviewed and action is taken to ensure the preservation of its content. This activity has proven to be time-consuming, but it is essential if the newspapers are to be preserved. Preservationist Pamela W. Darling has observed, "In the long run, what good is a bibliographic record, fully tagged, coded, subject to complete authority control, accessible through a dozen search keys on a thousand terminals, if the item it represents is no longer usable?" (Smith & Merrill-Oldham, 1985, p. 103).

The preservation of a state's newspapers is a shared effort between the public and the private sector. The preservation phase of the U.S. Newspaper Program has led to a combined effort of national, state, and local initiatives. While NEH provides considerable funding for each state's Newspaper Project, it is hoped that each state can provide up to 50 percent of the cost. This can include grants from state libraries and historical commissions as well as service-in-kind from the institutions participating in the project. Funds are also provided, upon occasion, from local agencies and from the newspaper publishers themselves, who are often represented on each state's Newspaper Project Advisory Board. Although New Jersey only began the preservation phase of its Newspaper Project in 1990, threatened files have been saved with funds from both the State Library and the Historical Commission, as well as from the communities themselves and the publishers of the newspapers. It is hoped that the preservation phase in every state will bring about a combination of public and private initiative to preserve their documentary heritage.

While NEH will ensure that newspapers in danger of imminent destruction will be filmed and thus preserved, newspapers that are at present stable may not be filmed at this time. Priority must be given to newspaper files that are in greatest jeopardy because of their physical condition. NEH will support efforts to preserve original newspaper files when that option is feasible. The American Antiquarian Society has made an effort to collect, microfilm, and preserve in original format newspapers published through 1875, but this excludes material published when paper was its most fragile.

There are presently twenty-three active state newspaper projects underway; thirteen have been completed. Representatives from each of these projects meet once a year to share information and to address several problems, ranging from the sublime to the ridiculous, that can and do arise during such an undertaking. Newspaper files have been

saved from the streets, from barns where a variety of creatures have nested in them, and from unscrupulous dealers who are not eager to have a unique title filmed prior to its sale (Corlis & Brown, 1988, p. 13). Each state approaches the project in a somewhat different way; certainly the author's own state's (New Jersey) problems are quite different from those of Montana. Over 4,500 newspapers have been published in New Jersey since 1777, far more than the output of such states as Montana and Washington, and more than the national output of such countries as New Zealand, Norway, and Sweden.

As has been mentioned earlier, not every United States newspaper will be saved in original format. While the remains of every newspaper might be preserved through a variety of techniques, ranging from polyester encapsulation to the physical strengthening of each individual sheet by use of delicate conservation techniques, the cost of such an effort would be astronomical. It would be well into the twenty-first century before such an endeavor to physically preserve the over 250,000 United States newspapers could be completed. Deacidification technologies, such as the Wei T'o and Diethyl Zinc (DEZ) processes, will retard deterioration but cannot strengthen paper. While efforts are underway around the world to develop techniques that will both deacidify and strengthen paper, it is likely to be several years before one or more of these techniques can be employed in a "mass treatment" situation at reasonable cost. The solution is to film endangered newspaper files as promptly as possible.

INTERNATIONAL EFFORTS

The United States is by no means the only nation to recognize the need to preserve its newspapers. In 1980, the International Federation of Library Associations and Institutions (IFLA) Section on Serial Publication established a Working Group on Newspapers to consider all matters relating to newspapers in libraries. Presently, it is working on guidelines for the cataloging of newspapers and is engaged in a survey of preservation policies of newspaper collections worldwide. Robert Harriman of the Library of Congress is the U. S. representative to the Working Group. As the United States and such former colonial powers as Great Britain, Germany, and the Netherlands began to address the problems of preservation and access to their own newspaper collections, it became evident that their national libraries often held the most complete files of newspapers published in their former colonies. It was clear that issues of preservation, bibliographic control, access, and microfilming of newspapers needed to be addressed and resolved within

an international forum. Thus, the Working Group sponsored an International Symposium on Newspaper Preservation and Access, held in London in August 1987, prior to the IFLA Conference in Brighton, England. The stated aim of the Symposium was "to gather together for the first time all those concerned with the task of maintaining and preserving an invaluable research and educational resource — newspaper collections." Its intent, according to the promotional brochure, was to "provide a forum for the discussion of the common concerns among those representing the major international newspaper collections of the world, their producers and conservators." Librarians gathered from four continents to discuss their approaches to the mutually shared problem of the preservation and access of newspapers.

There clearly is a need for internationally accepted policies and procedures clarifying what to preserve and how best to do so. Several questions must be resolved. For example, is a national repository responsible for preserving, on microfilm and/or in original format, every edition of every paper? How should bibliographic control be effected for such material? The questions of how newspaper collections can best be housed and how newspapers can be restored are complex ones which depend upon a number of variables in each country, such as the physical nature of the paper that the newspaper is printed upon, the environment in which newspaper collections are now housed and shall be housed, and the financial and human resources available for preservation and access. Representatives from a number of nations were shocked to learn that librarians in the United States do not attempt to preserve the original of every one of the country's 250,000 newspapers. While preservation microfilming is the accepted technology for preservation and access, many librarians are convinced that the original should be preserved somewhere, somehow.

There was considerable discussion at the Symposium about mass deacidification and paper-strengthening processes. The British Library Newspaper Library uses the Wei T'o system to deacidify individual sheets of newspapers when necessary. The French Conservation Center in Sablé is developing a deacidification procedure based upon the Wei T'o system. While newspapers are microfilmed before deacidification, much conservation work needs to be undertaken prior to filming because the originals are to be preserved. This makes the preservation process slow and labor-intensive. Dr. Gerhard Banik, former Director of Conservation at the Austrian National Library, described that institution's efforts to develop a "mass" technique for the preservation of original newspaper files; while this strengthening technique has potential, it is, to date, too expensive for practical use.

The discussion about mass deacidification and strengthening pro-

cesses continues; however, there is little that is actually known about these processes, and none are in regular operation. In a session on conservation at the Symposium in London, Banik pointed out that the developers of deacidification processes have been loathe to have them scrutinized by an independent agency and have published little solid technical information about them. There is a critical need for independent review and evaluation before librarians can make rational decisions about the physical preservation of their newspaper collections. This evaluation should be similar to but considerably greater in depth than the report by the U. S. Congress Office of Technology Assessment on the deacidification and strengthening processes that include Diethyl Zinc, Wei T'o, and several others being developed in the United States (U. S. Congress, OTA, 1988). It was, and is, acknowledged that the evaluation of the Wei T'o and Diethyl Zinc processes by George Cunha (1987) was a courageous beginning. Although there were deficiencies in Cunha's effort precisely because the technical information necessary for a thorough evaluation of the processes under review was not readily available to him, he revised it in 1989 to include more information about other processes currently being developed. There is hope that Cunha's effort marks the beginning of an open sharing of information between developers and between nations on mass preservation processes. Early reports from the British Library on a technique that uses enzymes for strengthening are encouraging. The Library has a commitment to share with the world its testing of the process, which is being undertaken at the University of Manchester.

Several companies in the United States are poised to introduce their processes to librarians and archivists. While their efforts to develop a mass technique for the deacidification and/or strengthening of brittle paper are to be applauded and supported insofar as possible, the custodians of collections need to remember that many of these processes will physically change the nature of paper, which is the object to be conserved. This is not necessarily a bad thing, despite the conservator's golden rule to do no treatment unto an object that cannot be reversed, if one considers that such a treatment may indeed be the only way to preserve an embrittled newspaper in a format resembling the original. However, it is clear that these processes need to be studied very carefully to ensure that, in the long run, they will not compound the preservation problem. Reports on mass deacidification and/or strengthening techniques are beginning to appear in the library literature. While these efforts can be greeted with cautious optimism, librarians and archivists with a firm grounding in the history of conservation must insist on technical data if they are to determine which processes will be best for the mass treatment of collections. Each process has its strengths and

weaknesses. Curatorial decisions about what is the appropriate treatment for each collection will have to be made. There is no right or wrong treatment. As much as possible needs to be known about each process so that educated decisions can be made. The preservation of the world's cultural heritage cannot afford national chauvinism or entrepreneurial secrecy.

Preservation microfilming, even in those countries where originals are preserved, is, at this time and in the foreseeable future, the way to ensure both preservation and access to newspapers. Rapidly deteriorating newspaper collections cannot wait until a mass treatment process is developed, tested, and proven safe over a long period of time. And the ultimate key to the preservation of the world's newspapers is cooperation.

PRESERVATION MICROFILMING

Today's Solution to the Preservation of and Access to Newspaper Collections

While the Library of Congress, the British Library, and several other national libraries are exploring optical disc technology and how it might be applied to the problem of the preservation and access of newspapers, it is clear that optical technology, presently in its infancy, is not an appropriate medium for the preservation of newspapers at this time. The currently developed technology has not proven its permanence, nor has there been an attempt, in the midst of a rapidly developing technology, to determine guidelines for playback and transfer of data. Imagine a scholar in the twenty-first century, working away in a warehouse in Maryland which the Smithsonian has constructed to house the vast number of optical readers developed in the final quarter of the twentieth century. The report, *Preservation of Historical Records*, (1986) by the Committee on Preservation of Historical Records, National Materials Advisory Board, and the Commission on Engineering and Technical Systems, National Research Council, evaluated the technologies that might be employed for the preservation of the paper records in the National Archives. The report concluded that, at the present time, microfilming technology is the least expensive and most effective technology for the preservation and access of documentary records.

During the same period that the above-cited report was being prepared, the Council on Library Resources, with funding from the Exxon Corporation, was examining technologies for the preservation of brittle books and other materials that were published on acidic paper from the 1860s to the present. While its Committee on Preservation

and Access initially was enamored of the new technologies for image storage and retrieval, the Council, too, determined that microfilming technology is the most practical, cost-effective, and permanent method for the preservation and access of library and archival materials at this time. Microfilm is relatively inexpensive to produce, and its permanence, durability, and relative ease of use have been proven. It can readily be converted to another technology if that is desirable.

With further funding from Exxon, a group of research libraries established the first nonprofit regional center exclusively for preservation microfilming, the Mid-Atlantic Preservation Service (MAPS), located in Bethlehem, Pennsylvania. The founder and president of MAPS is C. Lee Jones, formerly with the Council on Library Resources. Jones has a firm grasp of the technical and managerial complexities in establishing and operating a nonprofit technical service, as well as a longstanding familiarity with the library and archival communities. NEH and other funding agencies, however, continue to support the preservation microfilming activities at the first regional center established for library and archival materials: the Northeast Document Conservation Center (NEDCC) in Andover, Massachusetts. While it, too, can handle routine microfilming projects easily, NEDCC is able to deal with more fragile and difficult projects which would slow production at MAPS.

While there have been commercial microfilmmers, such as University Microfilms, Research Publications, Chadwyck-Healey, and Clearwater, who have been willing to take on the microfilming of newspaper files that are commercially viable, a number of microfilming companies are now approaching libraries and archives with the promise of "preservation" services. With the considerable publicity about the newspaper and brittle book preservation microfilming projects, they no doubt envision the profits to be made from the efforts to preserve our documentary heritage. In addition, several commercial library binding companies that already provide an array of services to their customers are expanding to include preservation microfilming. While competition to meet library and archival needs is more than a little welcome, preservationists need to be assured that the quality of the work meets the standards necessary to ensure the permanence, durability, and accuracy of the filmed record.

The American Library Association publishes an important manual, *Preservation Microfilming* (Gwinn, 1987) that includes chapters on every aspect of preservation microfilming written by experts such as Sherry Byrne (University of Chicago) and Carolyn Harris (Columbia University), who have been involved with major preservation microfilming projects for a long time. While the manual does not focus on the particular problems surrounding the filming of newspapers, it is important that

the people who are, and will be, involved in developing and implementing the state newspaper projects be familiar with its contents. Like any publication on a timely topic, the manual is already in need of modest revision, but its advice and recommendations can help avoid hours of work and costly errors.

It is critical that preservation microfilming be done correctly the first time around; there is rarely a second chance. Many newspaper files are too brittle to refile. The task begins when newspapers are selected for filming. The keys to a successful program are bibliographic control and preparation prior to filming. Both of these aspects must be addressed before materials are sent to be filmed, and they are often the most costly part of a preservation microfilming project. To begin, it is essential to ensure that the newspaper, or a portion thereof, has not previously been filmed; conversely, it is essential to ensure that previous filming is adequate. All film must be carefully inspected.

The physical preparation of the newspaper for filming should, if at all possible, be done in-house. It is necessary to have trained professional staff to supervise the collation of the material to be filmed and the creation of the targets. Specifically, the supervisor of the project should have a degree in librarianship or the equivalent, bibliographical experience, and, if at all possible, previous microfilming experience. At the beginning, professional staff must decide a number of bibliographical matters, for example, whether each title change is to be cataloged and filmed separately, with a separate OCLC number and bibliographical notes to connect the files. For years, most newspaper files were filmed as they stood, and title changes were ignored. Although recording each title change and filming it separately is time-consuming, the procedure ensures bibliographical coherence and makes the newspaper more accessible to the user. The *Newspaper Cataloging Manual* recommends that each title change of a newspaper be recorded and filmed separately.

Each newspaper should be collated page-by-page. It is important to keep an accurate record of missing and badly damaged pages or other problems that could serve to confuse a reader. The table of contents for each reel of film needs to be programmed so that the filmers know beforehand what issues are to appear on a given reel. Targets that include the primary bibliographic information about the newspaper should be prepared. A target is a document or chart that contains identification information, coding or test charts. A target contains technical or bibliographic control information that is photographed on the film preceding or following the document. The preparation of targets can be accomplished with the help of a computer. Quality control is essential and is ultimately the responsibility of the repository. Each reel must be inspected for image quality and bibliographical accuracy.

A filmed newspaper file should not be disposed of until inspection is completed, no matter how substantial the file. (The New York Public Library had to hold one file for five months before filming and inspection were completed.)

There are a number of standards and specifications for the filming of newspapers; those who are responsible for the collections need to be thoroughly familiar with them before a project is undertaken. Standards protect the consumer by spelling out procedures. The standards and specifications that have been produced by the American National Standards Institute (ANSI), the Library of Congress, and other concerned bodies have evolved over time after experience with the microfilming medium. Developed by experts, the purpose of the standard is to aid and protect the consumer. A listing of standards is found in the appendix to *Preservation Microfilming* (Gwinn, 1987, pp. 175-177). They are followed by a sample preservation microfilming contract (pp. 178-187). The newspapers that are to be preserved in microformat should be filmed properly so that they will remain a permanent historical record. There has been some discussion about the filming of newspapers in microfiche. While this format has its advantages for storage and retrieval, few standards for fiche now exist. Thus, 35mm reel microfilm remains the medium for preservation.

First, a master negative is produced which is of archival quality (American National Standards Institute, 1984). The master negatives must be stored in a safe and secure vault; such vaults are located in several areas of the United States. Frequently, a printing master is also produced which can be used to make copies of the newspaper for general use, sale, or loan. It, too, should be stored under sound and secure conditions, separate from the service copies. The regional centers, Mid-Atlantic Preservation Service and the Northeast Document Conservation Center, will store printing masters for their customers. Both master negatives and printing masters need to be stored under environmentally sound conditions, with temperature and humidity controls and protection from fire, flood, or other catastrophe.

CONCLUSION

During the 1990s, the National Endowment for the Humanities and the Commission on Preservation and Access will direct considerable money and energy to ensure that materials of permanent value, published on impermanent paper, will be preserved. While the Commission's primary concern is with the microfilming of brittle books in U.S. libraries research collections, its efforts have made millions of people aware of

the need to preserve the nation's documentary heritage. The preservation of newspapers has been recognized as one of the nation's priorities, with considerable support for the effort coming from the national government. But this is an effort that involves every state and nearly every community in the United States. It is an effort jointly undertaken by librarians, archivists, historians, the newspaper publishers themselves, as well as others in the community who care about the preservation of a national documentary heritage. And the effort is not limited by national boundaries; the libraries in this country, both great and small, contain files of newspapers that have come from every country in the world, newspapers which reflect their own national heritage. There are few libraries in the country that will not be involved on the local and state level in the United States Newspaper Program. It is an important effort, a part of the worldwide effort to preserve the newspaper—that everyday object that reflects our national character and the public events of everyday life.

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