



"Section 10: Preservation strategies" in "Preserving Harvard's retrospective collection"

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Section Ten

Preservation Strategies

Although preservation projects have accomplished much, preserving the research collections comprising the Harvard University Library requires that preservation activities become an integral part of library operations. Only then can we build for the future by applying preservation strategies early in the life of an item, so as to reduce the need for later, more expensive preservation action.

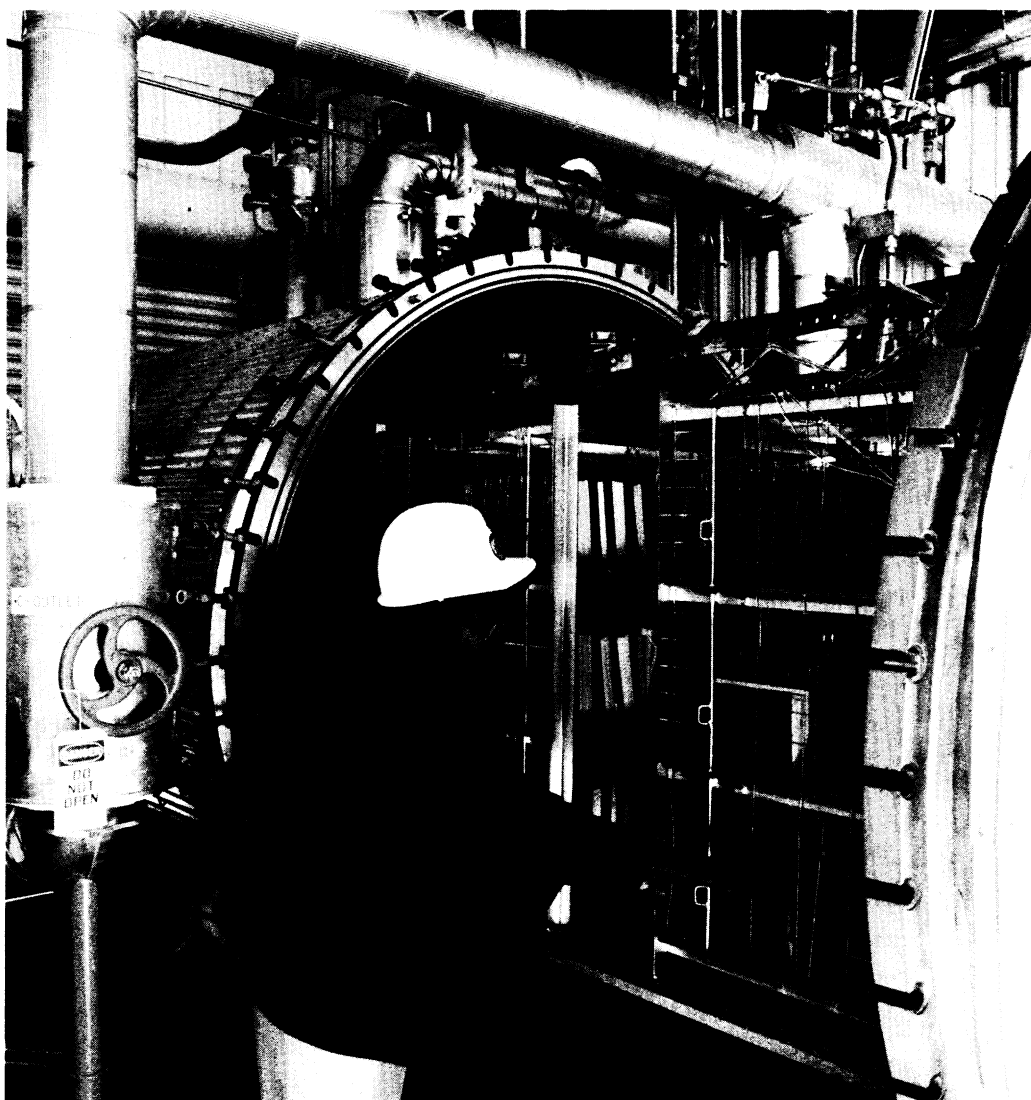
10.1—PREPARATION FOR USE

As materials are selected, acquired, and prepared for use, an assessment of their long-term durability should be made. Fortunately, Harvard has in some instances already done so. For instance, Houghton has long bought nineteenth-century French literature only on *grand papier*. Reformatting at the time of acquisition is an option used in Widener for newspapers and brittle books, and it should more frequently be exercised. In addition, simple remedial or protective action can be taken at the time of acquisition to prevent damage. Examples of this kind of activity, many of which are routinely carried out, include using security and identification labels of preservation quality, copying videotapes and LP's to provide use copies, rehousing archival collections in alkaline enclosures, and providing protective boxes for fragile or vulnerable materials. Deferring the cost of preservation action, when the need is obvious, is always the more expensive option.

Although most preparation activities are low cost, consideration should be given to including necessary preservation action in the cost of acquiring materials and processing them for use. For example, if possible, negotiations to acquire a special collection should include, in addition to possible funding for continued collection building, funding to provide necessary preservation and conservation treatment. This is especially crucial if the collection is expected to receive significant use or to serve as a source for exhibitions.

10.2—MASS DEACIDIFICATION

By analogy with other institutions that have carried out sampling, approximately 3 million of Harvard's volumes are severely embrittled and most of the rest of the collections, though not yet brittle, are printed on acidic paper that is destined to become brittle and unusable. The technology now exists to arrest the degradation of acidic paper by chemically treating whole volumes or groups of documents en masse to neutralize the acid in the paper and leave an alkaline reserve. Three processes are currently available commercially.



In one mass deacidification process, books are placed in a vacuum chamber from which the air and most of the water is removed, and the deacidification agent, diethyl zinc, is introduced to neutralize the acids in the paper and to leave a zinc oxide alkaline reserve. Pictured is the Senior Process Engineer Mildred Jeffery in the pilot plant of Texas Alkyls, Inc. in Deer Park, Texas. Photo courtesy of Akzo Chemicals, Inc.

Fortunately, new books entering the collections today will not all require treatment. The source of the paper deterioration problem was identified in the late 1950s, and an alkaline paper size became available to replace acidic alum rosin sizing. The number of paper mills switching to the alkaline process is steadily increasing, thanks to the environmental and maintenance advantages of running an alkaline mill. U.S. production of alkaline paper was expected to reach 64 percent by the end of 1990, and interest in alkaline papermaking is increasing worldwide.

If we act now, Harvard may be able to isolate and contain its acidic paper problem within this century by applying mass deacidification technology to new acquisitions on acidic paper and by treating selected portions of the retrospective collections. At a projected cost of \$6 to \$10 per volume, mass deacidification is a cost-effective, preventive preservation strategy for Harvard's libraries. The Mass Deacidification Task Group is currently reviewing options for mass deacidification. Their deliberations include an assessment of commercial processes, recommendations for selection criteria, and options for funding a mass deacidification program. The task group is also conducting a survey of the extent of Harvard's acidic paper problem to serve as the basis for developing strategic and financial plans.

10.3—LIBRARY BINDING

In Fiscal Year 1989, the Harvard University Library spent \$846,442 on library binding. This number represents eight percent of the amount spent to acquire books and other library materials. Despite its high pricetag, binding is so traditional and routine an activity that it has become nearly invisible. However, its value as a preservation activity cannot be disputed. Binding prepares new, unbound materials for the rigors of library use and provides security for unbound serial issues. When worn or inadequate publishers' bindings need replacement, library binding returns materials to usable condition.

Harvard is fortunate to have one of the nation's best library binderies, Acme Bookbinding, in its own backyard. Acme binds most of Harvard's books, and the company is known for attention to detail and its insistence on quality.

Although library binding is a well-established component of the preservation program of individual Harvard libraries, coordination by means of a "user group" is highly desirable. One function of such a group would be to examine binding preparation procedures, for reducing unnecessary variations would result in a better product and quicker service.

10.4—REPLACEMENT/REFORMATTING

For a portion of the collections, though, conservation treatment to retain them in their original physical format is no longer an option. They must be replaced or reformatted. Besides so-called "brittle books," other irremediably decayed materials are archives recorded on poor quality paper or by an ephemeral image process such as "Thermofax," photographic negatives produced on cellulose nitrate film, fugitive color photographic materials subject to fading and discoloration, cellulose acetate audio recordings that have degraded over time, items that have deteriorated from excessive use, and materials harmed by water-damage or vandalism.

Replacement or reformatting, though not as desirable as preserving the original artifact, can retain its content in some form, more or less successfully depending on the nature of the material. For example, reformatting by microfilming a text-only printed item may be an acceptable replacement, but a microfilm copy of a book that includes color plates and illustrations is rarely an acceptable replacement.

Some materials such as photographs on self-destructing media must be replaced if they are to be preserved at all. In contrast, the decision to replace or reformat printed library materials is a decision to republish. This choice means that a bibliographic search must be conducted to establish the bibliographic history of a particular work and to rule out the possibility that it has already been reprinted or preserved on microfilm by another library or a commercial micropublisher. Once acquired, the replacement must be given a new bibliographic record and for items reformatted at Harvard the record must be distributed to a national database to alert other libraries and users that Harvard has preserved the item. The expense involved in the replacement/republication option requires that subject specialists able to calculate the relative importance and type of use of a particular item be involved in the decision.

The Harvard University Library has established a facility to streamline and implement reformatting decisions, its first task being to help carry out a three-year grant from the National Endowment for the Humanities to preserve three collections



A high-quality photocopy facsimile can be made of a deteriorated book for approximately \$65. This option is chosen when the amount and nature of use makes a hard copy desirable.

from Widener, Baker, and the Law School libraries. This project represents the beginning of Harvard's contribution to a cooperative national program to preserve the text of deteriorated books in the nation's research libraries. Although the facility was established in order to conduct a single grant project, funding from NEH for future projects is expected. In addition the grant has enabled Harvard to develop a shared facility that can provide a cost-effective service for units of the University Library that are faced with decisions about preservation replacement and reformatting.

10.5—PHYSICAL CONSERVATION

Although some units of the University Library are able to arrange for modest repair and conservation activities in order to arrest deterioration, return items to usable condition, and protect materials from damage during use and exhibition, the scope and quantity of such work should increase commensurate with the need. The Harvard collections deserve the attention of a cadre of trained conservators who



Repair and conservation of library materials takes place in workshops located in several Harvard libraries. Additional trained conservation staff and facilities are needed, including a fully-equipped preservation center shared by all the libraries, to enable appropriate treatment services for the collections. Pictured is Dorothy Africa at work in the Law School Library.

are able to conduct condition surveys, supervise refurbishing projects, and—depending on the needs of an individual collection—provide treatment on site. The libraries also need access to a fully-equipped conservation facility that can provide expert treatment of both individual items and groups of material. Such a facility would also serve as a training center for preservation staff working in individual libraries and as a source for essential conservation services librarywide.

A prerequisite to justifying increased conservation activities, however, is an accurate description of the level of need. The experience of other large research

libraries indicates that at least one full time conservation staff member is needed for every 500,000 volumes, but past preservation conditions and the age and nature of the collections may indicate the desirability of a larger number. The establishment of a Collection Condition Task Group has been recommended by the Preservation and Collection Development committees to implement a series of condition surveys. The development and analysis of a pilot survey conducted in winter 1991 will begin the work of this group.

In addition, the University Library has requested permission to conduct a fund-raising campaign under the aegis of the Harvard Campaign to establish a Preservation Center for the use of all Harvard libraries. While serving as a focal point for preservation and conservation services, such a facility would also, through providing a compelling visual demonstration of the work of preservation—much of which is invisible (environmental control) or mundane (library binding), help to attract private funding for conservation.

10.6—ENVIRONMENTALLY-CONTROLLED STORAGE AND THE BUYING OF TIME

Restricted physical access in an environmentally-controlled and secure facility such as the Harvard Depository is an acceptable preservation option, for it has been demonstrated that storage in a low temperature and humidity environment significantly retards further deterioration.

Although it is natural to think of storage for items that are of low use and to link low use and slight importance, the two are not at all identical. Moreover, given the quality of the environment at the Depository, it may be appropriate to use that facility for other than low-use materials.