VOLUME 14
No.4
2007

Archival Products
NEWS

Planning for Conservation of Archival Scrapbook Collections

by Jennifer Hain Teper and Emily F. Shaw

AT THE UNIVERSITY OF Illinois at Urbana-Champaign (UIUC) Libraries, the Student Life and Culture Archives holds almost 500 scrapbooks and photo albums that document student life from the early 1900s through the present. These contain minutes, diaries, letters, notes and captions from and about contemporaries, official university documents, photographs, program booklets, art work, sheet music, news clippings, and artifacts. The scrapbooks provide glimpses into student culture and personal experiences. However, the current condition of many of the scrapbooks place them at high risk for damage and loss.

Scrapbooks are often made of poor quality materials which decay rapidly over time. Combined with the degradation of the materials enclosed in them and the physical stress placed on the scrapbook structure by the weight of materials on their pages, many scrapbooks show severe physical damage such as embrittled pages, broken bindings, and detached artifacts. Starting in 2005, the Conservation Unit performed an item-level conservation survey on the entire collection of 494 items. Upon completion in 2006, the second stage of the project, the implementation of conservation treatments on identified items, was begun and is still ongoing.

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Survey Methodology

A survey tool was built in Microsoft Access to record the age, structure and materials used for each scrapbook including: binding format, page type and attachment method of enclosed materials. Condition of the binding, support pages, and attachment of materials was also recorded (rated on a scale of 1-3 for "good," "fair" and "poor"), as was the condition of the materials held in the scrapbook, including: photographs, manuscript papers, printed papers, metals, plastics, rubber, cloth, animal skins/feathers, food and plant materials. Each scrapbook was then assigned an overall condition ranking of 1-5 ("fine," "good," "fair," "poor" and "very poor") based on the averaged numbers given to the individual condition rankings.

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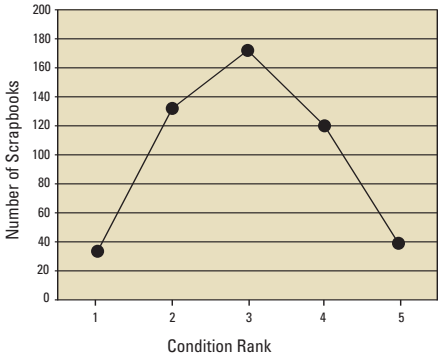

Fig. 1: Overall condition of the scrapbooks.

Results of the Survey

Scrapbooks surveyed dated from the 1870s to 1990s with the majority dating from the 1910s, 1920s, 1950s and 1960s. Almost one-third of the collection was given an overall condition ranking of 4 (poor) or 5 (very poor) (see Fig. 1). Many high rankings were due to the poor condition of the scrapbook (i.e. the binding and paper of the book) rather than the condition of the materials held within, though in many cases the deterioration of the attached materials appeared to be exacerbated by the poor condition of the pages and bindings.

Binding Style and Condition

Overall, most scrapbooks were found disbound (see Table 1). Of those in their original bound format, the majority was side-laced (25.3% of the collection) or post bound (12.8%). Of all binding formats surveyed, side laced and sewn structures showed the highest rate of damage.

Page Type and Condition

The majority of the scrapbooks had paper pages (see Table 2). Unfortunately, due to the poor quality paper used in many of them, a very high percentage of pages (over 35%) were found to be brittle and fractured, thus receiving a ranking of "poor."

Attachment Methods and Condition

Many methods were used to attach memorabilia to pages. The most popular was glue (75.5% of the total, see Table 3). Tape followed with only 24.1% of items surveyed. Overall, any method that used an adhesive to attach items showed higher damage, with 30% of glued items ranked as "poor," as well as 39% of taped items.

Types and Condition of Memorabilia Found within Scrapbooks

The two most common types of materials found within the scrapbooks were papers and photographs. Over 88% of the papers identified were printed, mostly newspaper clippings (see Table 4). Of these, almost 33% were in poor condition, as compared to only 7% of manuscript papers.

The most common photographic format, silver gelatin prints (47.6%, see Table 5), showed a relatively low rate of degradation (only 11% ranked as poor condition). Secondly, color prints (33.4%) aged relatively well, though many of those ranked as "fair"

	1	2	3	Total
Adhesive	0.8%	0.6%	0.0%	1.4%
Post	7.5%	3.4%	1.8%	12.8%
Ring Binder	2.6%	1.8%	0.0%	4.5%
Sewn	0.0%	0.4%	0.8%	1.2%
Side-Laced	5.5%	12.3%	7.5%	25.3%
Spiral	0.8%	1.0%	0.0%	1.8%
Staple and Strap	1.4%	0.4%	0.0%	1.8%
Other	1.8%	1.4%	0.4%	3.6%
Disbound	0.0%	0.0%	0.0%	48.0%

Table 1: Binding style and condition.

	1	2	3	Total
Laminated Pages	0.4%	0.6%	0.0%	1.0%
Magnetic Pages	1.8%	2.2%	0.2%	4.3%
Paper	18.0%	32.2%	27.1%	77.3%
Paper w/ Plastic sleeves	1.0%	0.6%	0.0%	1.6%
Repurposed Paper	0.6%	1.2%	0.2%	2.0%
Other	1.2%	0.2%	0.0%	1.4%

Table 2: Support page type and condition.

	1	2	3	Total
Glue	16.0%	37.7%	21.9%	75.5%
Magnetic	0.6%	3.2%	0.8%	4.7%
Paper Clip	0.0%	0.0%	0.2%	.02%
Pin	0.0%	0.2%	0.0%	.02%
Plastic Sleeves	0.6%	0.0%	0.4%	1.0%
Sewn	0.0%	0.2%	0.0%	0.2%
Stickers	0.2%	0.4%	0.0%	0.6%
Staples	1.0%	1.8%	0.8%	3.6%
Straps/Mounting Corners	2.0%	6.1	1.8%	9.9%
Tape	4.5%	10.3%	9.3%	24.1%

Table 3: Attachment methods and condition.

(41% of all color photographs) were noted to exhibit some degree of fading or color shift, most frequently losing their cyan and yellow dyes to shift towards more magenta hues.

Less common materials found within the scrapbooks included pennants, leather bound booklets, plastics, balloons, pressed flowers and feathers. (see Table 6). Plant materials, food and rubbers aged very poorly as might be expected. Cloth, animal skins and feathers aged moderately, and metals and plastics aged reasonably well.

Identification for Treatment

The conservation staff worked with the archivist at the Student Life and Culture Archives to devise a prioritized plan to address the preservation, stabilization and repair needs of the scrapbook collection. First, all scrapbooks ranking 4 or 5 for their overall condition and 3 for condition of attachment, were selected as targeted scrapbooks for treatment. From this list of 260 items, 169 were selected as high curatorial value to the collection. These high-priority and high-damage items were broken into two classifications for treatment: 1) perform simple repairs such as paper mending, re-attaching loose artifacts and simple cover repairs for those exhibiting "poor" levels of attachment; and 2) construct custom protective enclosures or modify interiors of existing enclosures for items with extremely embrittled support pages or severely damaged bindings (noted as "severely damaged"). These severely damaged items would then be reviewed for more advanced conservation treatment later.

	1	2	3	Total
Manuscript	9.5%	17.8%	2.2%	29.6%
Printed	19.4%	40.5%	28.9%	88.9%

Table 4: Type and condition of paper.

	1	2	3	Total
Albumen	0.0%	0.4%	0.2%	0.6%
Color	17.0%	13.8%	2.6%	33.4%
Cyanotype	0.4%	2.8%	0.2%	3.4%
Silver Gelatin	22.9%	19.4%	5.3%	47.6%
Other	2.0%	0.4%	0.8%	3.2%

Table 5: Photographic processes and condition.

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Treatments Undertaken

Bindings and Other Structural Problems

Most of the collection's scrapbooks were made by college students with mass-produced books designed for convenience, but not for posterity. Of the scrapbooks surveyed, 71% were side-laced with either string or a leather cord, or bound with metal or plastic posts. While these bindings allow compilers to easily add more pages to the scrapbooks, their inflexibility

	1	2	3	Total
Cloth	0.4%	0.6%	0.0%	1.0%
Plastic (incl. glitter)	1.8%	2.2%	0.2%	4.3%
Rubber	18.0%	32.2%	27.1%	77.3%
Metal	1.0%	0.6%	0.0%	1.6%
Skin/Feathers	0.6%	1.2%	0.2%	2.0%
Plant Materials	1.2%	0.2%	0.0%	1.4%
Food	0.0%	0.0%	0.4%	0.4%

Table 6: Types and conditions of other memorabilia.

Fig. 2: A broken hinge on a scrapbook cover.

Fig. 3: The same cover with hinge repaired.

Fig. 4: Detached items due to adhesive failure.

Fig. 5: Items reattached with paste.

caused the most pervasive structural problems in this collection, including broken or weakened hinges and detached pages. Several relatively simple repairs substantially improved the usability of scrapbooks.

Scrapbooks with weak or broken hinges are awkward to handle and place undue stress onto the books' fragile pages. Detached covers were reattached and weak hinges were reinforced using PVA adhesive and either sympathetic book cloth or dyed Moriki paper similar to that used for standard book repairs in the Conservation Lab (see Fig. 2 and 3). Pages in side-laced or post bound scrapbooks frequently separated from the rigid bindings. Using 115 gsm buffered, lignin-free paper endsheet stock, small donut-shaped hole reinforcers were punched and adhered using wheat starch paste to the back of support pages where they are less visible. Reinforced pages were then reinserted into the binding structure.

Loose items

Most scrapbooks contained loose or detached items due to adhesive failure or by the compiler's choice not to adhere certain items to pages. Items loosened by adhesive failure were pasted back into their original locations (see Fig. 4 and 5), so long as their original locations could be determined. Loose items were placed in archival envelopes, Permalife folders, or polyester sleeves. Loose items in folders and envelopes were then placed as near as possible to where they were found and labeled with identifying call numbers and title information.

Enclosures and Modifications to Existing Boxes

Historic scrapbooks may take all shapes and sizes, but pre-purchased archival storage boxes are more standardized and may not provide an ideal fit, particularly if more than one item is stored in a box. Many of the scrapbooks treated required custom protective enclosures and/or modified box interiors to protect them from damage in storage and transit. For scrapbooks damaged beyond simple repair, custom-fitted four-flap boxes were made from 20 point Bristol board to snugly contain loose and brittle pages.

Storage boxes were often much too large for their contents. To protect scrapbooks from shifting and causing further damage, simple, custom-sized spacers of corrugated E-flute board were made to fill the empty spaces inside the boxes. In other cases, storage boxes were over-filled, causing the box lids to bulge and putting undue pressure on box contents under the weight of stacked storage. To relieve pressure in these over-filled boxes, corrugated board risers were added to raise the wall of the boxes just enough to allow the lids to fit comfortably. This redistributed the weight to the box instead of the boxes' contents.

Conclusion

Although ongoing, a few conclusions may prove useful to other libraries and archives. Simple repair methodologies already practiced in book and paper repair can be applied to scrapbooks with a high degree of success and render these artifacts more useable and stable with relatively little time. Additionally, housing choices, such as standardized boxes, should be weighed carefully against the potential for further damage due to inappropriate boxing. Different sized scrapbook boxes should be considered to better fit the materials they hold and items should not be forced into boxes if they do not comfortably fit. Alternatively, simple spacers can be used to make standardize boxes more appropriate when housing differently sized artifacts.

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Building Compromises: Assessing the Options for Protecting Collections During Construction

by Jacob Nadal

LIBRARIES AND ARCHIVES undergo construction and renovation at some point during their existence. This always raises the question of how to best protect the collections. The issues are rarely as simple as deciding what will keep the dust off the books. Different types of media require different types and levels of protection. Collections may need to be accessible during the construction work and different construction activities pose different threats and operate on different timelines.

Many conservators and preservation administrators have dealt with the collections-centered issues in protecting the materials. This article turns to the context for that protection and gives some guidance on building-aware approached protection during construction. Being alert to the context in which we develop our protection plans ensures that the protection strategy is thorough and resilient enough to do its job while also adaptable to the inevitable compromises that come with construction.

Construction Projects

Construction projects must proceed without complete and perfect information, especially those that are concerned with repairs or renovations to a building. During the course of initial construction, subcontractors may make on site alterations to the plans provided by the architect and lead contractor. Recompiling this information into the final "as-built" is fraught with difficulties and as often as not, deviations from the original plans are left unrecorded. The same issues apply to subsequent documentation of renovation. Both of these issues exert an influence over renovation projects with every gap in information making their exact progress and requirements harder to predict.

In addition, the simple forces of time and use are at play in our facilities, just as they are at work in our collections. Because of this, the timelines and plans that are made have to be accepted as the best intentions, given the level of available information. Protection for the collections has to manage the risks that exist in that gap between the work that is planned and what unfolds.

In buildings with long or complicated histories, there may be a need for exploratory work to determine the extent and type of repairs required. Although this work may be minimally invasive and seem to require very little protection, it can lead directly into any type of protection situation and presents the risk of surprises that can lead to collection disasters or dramatic changes in the course of a renovation. Protection must be planned against what could occur, not just against what is planned.

An additional complication is that the work in question may not be occurring on behalf of the library itself. In multi-use and multi-occupant buildings, many of the building systems and structures are likely to be shared. It is important to remember that the priorities and timelines that your neighbors have may differ from yours. This becomes especially important when delays occur and compromises are made. It's entirely possible that the changing priority of other construction items will impact the work that your protection is addressing. Because of this, your protective measures may have to be installed within a

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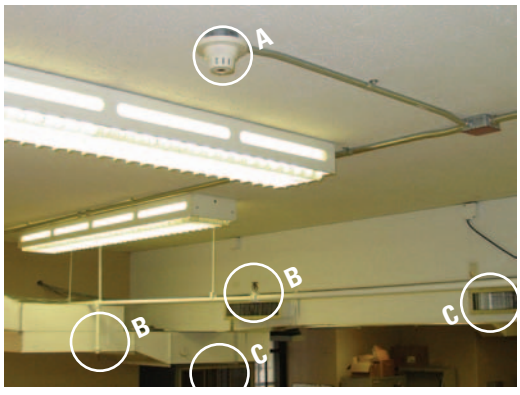
time frame that limits certain options. Likewise, they may have to stay installed for longer than intended.

Although the basic prescription for protection—seal out moisture and dirt with plastic and use plywood sheeting to deflect larger debris—applies in almost every situation, there is great variety in how and where to apply it.

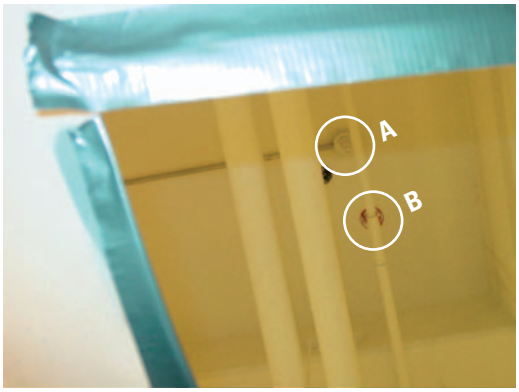
Fire Detection and Suppression

Before sealing off any areas of a building, determine the locations of fire detection and suppression equipment. For fire detection to be effective, the detectors must have ready access to the environment that they are trying to protect. It is very easy for protection to be installed in such a way that it insulates the potential sources of a fire from the detectors. Likewise, since many fire protection systems pre-wet materials adjacent to a particular point of combustion, there is potential for the protection to perform the right function at the wrong time. What should have prevented water damage from construction accidents can easily prevent water from sprinkler systems serving as protection from fire.

Be careful in installations that require plastic to be hung underneath sprinklers and detectors. In the photograph below, plastic sheeting will have to be hung in runs above the sprinkler pipes and between the pipe hangers and may need to have windows cut in to allow fire detection equipment to operate.



Complicated fire detection (A) and suppression (B) systems and air paths (C).



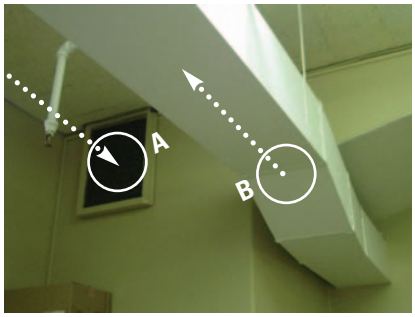
A window for detection (A) and suppression (B) equipment.

Neither solution is very satisfying. Hanging plastic above the system requires a great deal of effort and expense to splice plastic sheeting around the overhead supports. Installing the plastic below the system is simpler, but still requires some additional labor to open windows for the fire suppression and HVAC systems. These windows also compromise the primary function of the plastic as protection against water emergencies.

In these situations, a risk assessment model can be used to determine whether the time during which fire equipment is impeded is worth the extra protection, or vice versa, depending on the type of construction threats.

A possible compromise to avoid this kind of nerve wracking calculation is to isolate the areas of risk and protect them differently. Because collections themselves are usually very low risks for ignition, there is less danger in protecting them with an emphasis on reducing construction threats. Where there are sources of ignition, most commonly electrical equipment and outlets, protection can emphasize effective fire suppression at the risk of some construction risk.

It would be wise to consult with the contractor's insurance agent and the local fire department to determine the exact degrees of flexibility in your instance, but remember that one size does not need to fit all. Isolating areas with different levels of risk and different required levels of protection is an important step towards safety and success in these projects.



Interconnecting supply (A) and return (B) air ducts.

Air Handling

Another potential problem in protection comes from the building's air path, especially as we deal with audio-visual media. When several rooms are served by the same air debris or fumes from one space to be carried into another area.

A good first step is to get the building engineers involved in planning any construction. Be alert whenever plans are focused on protecting only a part of a room around a localized area of construction. Look for air returns, often found near thermostats, and for air supplies. You can test for air direction with a sheet of paper: return air vents will have a slight vacuum effect, while supply air will have a fan effect, blowing the paper towards the room. If return air vents are near the construction area, be especially careful to discuss options with the contractors and engineers. Make sure you're not pulling debris into your air handlers unnecessarily and also that you won't be redistributing debris through the collections.

Response and Readiness

A final note concerns general observation and response time. When construction is going on in your building, try to schedule work in such a way that you can check through construction areas to catch leaks, spills or potential accidents before they turn into crises.

You may want to consider adding some rounds or a scheduled conversation with the foreman to your routine. However, because of the "on-call" nature of much construction work, especially at the managerial level, a library-style standing meeting may not be possible. The contractor should also provide you with a cell phone number for you to check in with the appropriate supervisors. Fortunately, the construction industry as a whole keeps earlier hours than the library profession, making it possible to check in with construction personnel as a part of your opening procedures. If work is happening over days when the library is not open, be double sure to check through potential problem areas on your return.

Access to Collections

When access to collections is required during a construction process, the problems are greatly complicated. In these instances it is wise to take a cue from fire protection and address the areas surrounding the potential problem as well as the construction site itself. Extend overhead canopies by several feet and hang overlapping plastic to form walls against infiltrating dust and debris. Spill barriers might also be considered if there is a possibility of significant water accidents, in plumbing projects. Barriers and diverters are available in several varieties, such as overhead "reverse umbrellas," flexible plastic berms or dikes and socks of absorbent materials that lie along the floor.

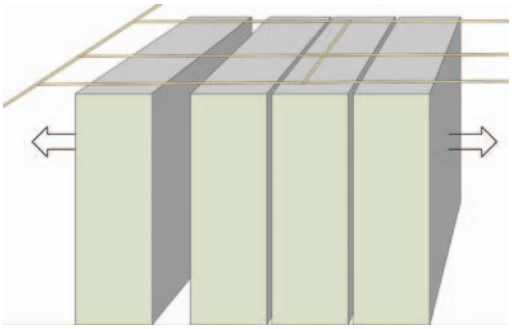
Decades of experience have shown the value of protecting the collections themselves and created standard set of practices for doing this.

Compact shelving always poses exceptions to standard practice and can be a problem in disasters. For electrically powered shelving, make sure that you know where the tools are located in case you need to move shelves manually if power is shut down from construction, intentionally or otherwise. In my own library, we have had success keeping compact shelving protected but accessible with a layer of plastic sheeting affixed to 2' x 4' boards and laid on as a temporary roof. In this project, the leading concern was incidental or accidental dust, water and debris from overhead work on the roof. Although not sufficient to provide protection during all types of construction projects, this has worked in its limited application.

Summary and Checklist

A few important questions can be asked to help understand the constraints in a construction project and evaluate the risks that it entails.

- Is access to the collections required during construction?
- Are there audio-visual media or other objects that are sensitive to fine dust or particulates?
- Does the work area share air handling equipment with other areas that will not be protected?



Compact shelving can be protected by hanging plastic from a frame.

- Does the library have an up to date disaster plan and 24/7 contact list?
- Can fire detection and suppression equipment be safely blocked from the collection?
- Can potential ignition sources be protected separately from the collections?

In parallel with this sort of risk assessment, it is important to make sure you understand the built environment in which you are installing protection.

- Where are fire detectors and sprinklers located?
- Where are the possible sources of ignition (e.g. electrical lines and outlets)?
- Where are the supply and return air ducts for each space?
- What other spaces share the same air handling equipment?

Construction poses undeniable risks to the safety of our collections. Decades of experience have shown the value of protecting the collections themselves and created standard set of practices for doing this. However, the complications that arise in planning and completing construction require compromise to allow for collections safety and the success of the project.

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