

LOUISE KUFLIK

Associate  
Carolyn Horton and Associates  
New York, New York

## Decisions in Conservation and Preservation in the Conservation Laboratory

The decision to conserve has already been made when a book is brought to a conservation studio. It means that the material has been found to have some intrinsic or artifactual value. What to conserve is the decision of the librarian, the archivist, or the bibliophile. How to conserve it is fundamentally the decision of the conservator, often made in conjunction with the custodian of the material or at least with his/her consent. All decisions are made after a careful examination and testing of the material and a thoughtful assessment of the techniques available. Unfortunately, the question of cost must enter into the discussion because book and paper conservation is a craft almost entirely executed by hand. Conservators employ time-honored techniques, sometimes supplemented by modern technological advances, but always guided by the principle of reversibility in deference to the historical, cultural or aesthetic importance of the materials with which they deal and with an awareness of the possibility that some better technique or material may come along later in this developing field.

Conservators generally find librarians to be far more understanding of the nature and needs of the materials than some kinds of clients, who may want things completed yesterday and whose ethics are often of a questionable nature—not caring to see things in the long term but merely wanting a book “held together” so that it can be sold quickly or repaired inexpensively. We can hold it together, reattaching boards quickly, but that book will not be able to stand on the shelf very long nor have its covers opened too many times. And what about the state of the paper inside? In fact, perhaps the book or document even looks more venerable and valuable with the dirt and grime. How ethical are requests to make repairs “invisible,” to remove plates or bookplates or change flyleaves or separate parts of

a manuscript? The clearly unethical nature of some requests make them easy to turn down, but requests to execute partial repairs, where more extensive work is required, is often a problem to conservators, who see the book as a functional object and are committed to the "restoration of function" as well as to producing a harmonious repair or restoration.<sup>1</sup> I speak, too, of the book lover who cannot afford the proper type of repair or rebinding and for this reason selects historically or aesthetically unsuitable materials.

Let us examine the types of decisions that are made in a conservation studio by following a book through the steps it undergoes in the conservation/restoration process.

First, the monetary value of an item, or to use the proper phrase, the "limit of liability" must be established by the custodian. The conservator should express no opinion in the matter and the value of the material should in no way affect the quality of the work rendered by the conservator nor should it influence the cost of the repair.<sup>2</sup> How realistic this principle is raises an issue of concern to conservators because the cost of the conservation work can often far exceed the worth of the item. On the other hand, an item of sentimental or personal value, but of no monetary value, is often irreplaceable.

The book is now given a preliminary physical examination and the usual bibliographic information is noted along with the type of binding. Of special significance, when it comes time to estimate the cost, will be the size and number of leaves. Then the pH of the paper is taken. Under the heading "Condition When Received" everything of significance that can be observed is described, e.g., the state of the paper, especially its tensile strength as revealed by folding a corner. Other aspects, too, are noted such as water or dirt stained or discolored paper; trimming; printing on the right grain; the presence of mold, foxing, worm holes, or tape, and the condition of the sewing. If there are inks, they must be tested. The presence of protective sheets and their condition are cited. The condition of the binding is also recorded, noting such things as staining, discoloring, abrading; detached boards or spine; cracked hinges; bent, broken, or worn corners and torn or missing headcaps. The conservator also tries to determine if the binding is original. For documentation purposes, a photograph of the materials should be taken.

Based on these observations, the conservator makes suggestions about the nature of the proposed treatment. Often there is more than one proposal; then the custodian will have a choice.

From his or her experience, the conservator must make an educated guess as to how long it will take to execute the proposed treatments. The cost estimate is based on a calculation of the time required to complete the work. Sometimes, after work begins, there are unpleasant surprises that

can throw the estimate off and call for reappraisals of the proposed treatment. Such surprises include stubborn adhesives, inks that suddenly feather or even disappear, colors that strike through, and paper more embrittled than first thought.

Here, then, are some of the decisions the conservator faces, in the order in which they are made: based on the pH, should the paper be deacidified and can it be done safely. If it can be deacidified, how should it be done? (Sometimes there is no choice.) Manuscript inks that run in water but not in alcohol can be deacidified nonaqueously, but some inks are soluble in both. What about books papers? If the binding and sewing are sound and the paper is very acid, the book could be deacidified nonaqueously by brushing on methyl magnesium carbonate in a fume hood. Nonaqueous deacidification is not always the perfect answer. There are some printers' inks that can run in it and some papers discolor slightly. If the binding is at all weak, the slight swelling that results from nonaqueous deacidification can cause the outer hinges to crack. Nonaqueous deacidification for books with sound bindings and sewing may soon be replaced by a mass deacidification process. If the binding is to be replaced but the sewing is sound, what type of deacidification should be used? If the paper is very discolored it will greatly benefit from the washing that always precedes aqueous deacidification. Conservators prefer to wash discolored and embrittled paper if possible because it refreshes the paper. Stains and discolorations are removed or reduced and deteriorated size and soluble acids are washed away. The paper always feels better after it has been washed. However, washing and aqueous deacidification is a much longer process necessitating disbinding and the consequent mending of folds and resewing results in a more costly procedure. The decision, therefore, must always be made as to whether a book with sound sewing should be washed.

The type of paper mending is another consideration which must be based on suitability and economic realities. Heatset tissue allows for faster mending and makes sense when extensive mending is required. The more traditional Japanese tissue and paste mends and fills, though the process takes somewhat longer, permits a more harmonious matching of color values and paper texture. An alternative treatment, not usually available in the small conservation studio, involves the leaf casting machine.

If nonaqueous deacidification of the bound volume is selected for embrittled paper, then nothing much can be done for the paper other than to repair tears. If there are a few mold-deteriorated leaves they can be brushed sized. Only if the book is not to be heavily used should badly embrittled paper be nonaqueously deacidified. Deacidification will not restore paper to its original state or even improve it, but deacidification will slow down further deterioration.

For paper that is being aqueously deacidified and is embrittled, the options are more numerous. Sometimes washing will remove enough excess sizing that contributed to the embrittlement, so that paper can be revitalized and allow normal sewing and binding. But if the paper remains very fragile even after washing and deacidification, each leaf can be supported on either or both sides with heatset tissue. The book can then be rehinged, sewn and bound; or as an alternative, after mending, the leaves can be encapsulated in a polyester envelope and housed in a postbinding.

Water stains and tide lines can usually be removed or, at least, reduced by washing. In some cases, mold stains and damage can be reduced by washing with the damaged paper responding well to resizing. Tapes and tape stains usually must be removed with solvents; for this reason, fume hoods are a necessary piece of equipment because of the toxic nature of most solvents. Though the tapes can almost always be removed, the remaining stains often cannot be eliminated entirely. When treating manuscripts, conservators are sometimes faced with the dilemma of some reduction in legibility or some feathering of inks or type in order to rid the paper of the adhesive which, if permitted to remain, would continue to degrade the paper. When this problem arises, the final decision is often left to the custodian of the material.

Foxing and other stains on a piece of art work on paper may be bleached out if they interfere aesthetically, but on book paper, we almost never bleach. As long as all the adhesive is removed and can cause no further damage, we can live with the blemish, especially if it does not obscure legibility. Bleaching residues, which are difficult to remove entirely from paper, can cause damage later on.

Discolored protective sheets should be removed. They were inserted to protect against offset of the freshly printed plates. The ink has long since dried and the acid from these sheets can migrate.

The next series of decisions, dealing with the nature of the binding structure, is usually up to the conservator alone. How should the paper and signatures be prepared for sewing and how should the boards be attached? All these are determined by the style of the binding, the size of the book, the condition of the paper and the intended use. Will the book be merely cased (a technique we usually restrict to cloth bindings) or will the boards be attached to the book block before the book is covered? How heavy should the boards be? How many cords or tapes should the book be sewn on? The usual practice in conservation binding is to follow the original sewing structure if it is possible and appropriate.<sup>3</sup> What type of headbands should be used, and in what color? Color choices for headband and covering cloths, papers and leathers should be in keeping with the prevalent colors of the period. Should the book be a tightback or should it have a hollow tube? A tightback might be historically accurate but the condition of the

paper or the narrowness of the inner margins might make a hollow tube more appropriate from a conservation perspective. If the paper is in a poor state or the inner margins are not very generous or for some reason it is necessary for the book to be exceptionally flexible in its opening, the conservator might consider sewing the book on a concertina so that when the book is glued up no adhesive will touch the signature folds. Another solution to the flexibility problem, especially in a book of plates, would be to have each leaf or signature thrown out on guards.

If the binding on a book is original, the questions arise as to whether the binding can be restored; whether the client wants it restored; whether the book warrants restoration because of bibliographic, historic or aesthetic significance.<sup>4</sup> To help in identifying original bindings, a good reference library, especially of exhibition catalogs, is most helpful. It is amazing what can be done to restore a deteriorated binding. It is possible to use original parts over new flexible materials which harmonize with or are dyed to match the original. Books can be rebacked when the boards are detached or the spine is missing. Corners can be rebuilt and recovered and worn heads and tails can be repaired. In finishing restorations, tools that duplicate or closely resemble those used on the original binding are sometimes used. A large collection of old tools can prove indispensable for this process. However, the question of whether or not to complete areas where the original gold has worn away is a sensitive issue among conservators, both due to the higher costs incurred for a purely cosmetic effect and, more importantly, because the process might be seen as an attempt to disguise or alter the original state of the binding.

If the existing binding is beyond repair or is not original, there are several possibilities to be considered concerning rebinding. A replica binding, whereby the conservator will try to find papers and other materials that duplicate as closely as possible the original, is one option. Decorated and other old papers from discarded bindings are saved for just such an occasion. There are also modern decorated papers made to replicate many of the historic patterns. Another possibility, use of a period binding, is one that will capture the spirit of the binding style of an earlier time. Or one could opt for a modest conservation binding so that more time and expense can be devoted to the inside work on the paper and the binding made just functional and conservationally sound.

A postbinding is yet another choice. Having decided that the condition of the material requires polyester encapsulation, it is also necessary to consider the nature and value of the material because its bibliographical integrity will be destroyed when the gatherings and folds are separated to accommodate encapsulation. Postbindings are a fine housing for manuscript and scrapbook collections and are currently being recommended for holdings of permanent archival or research value because of the complete

reversibility and the protection offered by postbindings against temperature and humidity fluctuations, environmental pollutants and physical and mechanical abuse.<sup>5</sup> If possible, materials should be deacidified before encapsulation.

An alternative in conservation is to box the item. If a suitable binding or restoration cannot be executed for economic or technical reasons, yet something must be done to prevent further deterioration especially in a case where boards are no longer attached or the covering materials are in a very fragile state, the decision to box the materials, as is, might be made. Boxes are a conservation holding action, keeping the materials together, protecting them from dirt, dust and, to some degree, from environmental fluctuations and pollutants. They can be constructed with a lip for books with boards that warp, and they can be made for a newly rebound book, especially if it is desirable to keep the original binding or binding remnants housed with the book. Boxes are particularly suitable for pamphlets, permitting them to be shelved along with books.

After restoration a ticket outlining the treatments and materials used should be attached to the back inside cover to be kept as a permanent record with the book.

Whatever treatment is finally decided upon must be based on considerations of use and stability of materials. No technique or materials must be used, however attractive to the eye, which may deteriorate and cause irreversible damage.

## NOTES

1. Horton, Carolyn. "The Ethics of Book Restoration." (Paper presented at the Hunt Seminar, Pittsburgh, Pa., 13 Nov. 1979).

2. American Institute for Conservation of Historic and Artistic Works. *Code of Ethics and Standards of Practice*. Washington, D.C.: AICHAW, 1979.

3. Cains, Anthony. "Techniques of Preservation Based on Early Binding Methods and Materials." *Paper Conservator* 1(1976):2-8.

4. Morrow, Carolyn C. *A Conservation Policy Statement for Research Libraries* (Occasional Papers No. 139). Urbana-Champaign: University of Illinois Graduate School of Library Science, 1979.

5. Waters, Peter. "Archival Methods of Treatment for Library Documents." In *Preservation of Paper and Textiles of Historic and Artistic Value* (Advances in Chemistry Series, no. 193), edited by John C. Williams, pp. 13-23. Washington, D.C.: American Chemical Society, 1981.

## DISCUSSION

*Anthony Amodeo* (Newberry Library, Chicago, Illinois): When you deal with a binding that is fairly old and maybe not typical, especially of some

commercial production, and when you decide to rebind it, do you save not only the covers but perhaps photograph the sewing as it existed and the top edge as well? Do you save pieces of the sewing thread for documentation of binding history?

*Louise Kuflik:* Normally we don't document. In a laboratory, it's probably done automatically. In a studio, we don't, but we certainly retain all parts of the original binding until the client has picked it up, so, if they want any remains of the binding, it's certainly theirs. If they expressed an interest in having this documentation, we would do it.

*Amodeo:* If your customers are libraries, do they usually request such a saving?

*Kuflik:* Not really. No.

*Kathryn Luther Henderson* (Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign): I have a three-pronged question. In these days librarians are sometimes seeking alternative careers related to librarianship. Could you comment on the following since you hold library degrees? First of all, do you really consider this an alternative career to librarianship? Second, how does your library degree and your library work experience relate to your conservation experience? And third, what advice can you offer to students who might be interested in pursuing a career using their library degree in the way that you are using yours?

*Kuflik:* I suppose it might be viewed as an alternate career for a librarian although I think I slipped into it somewhat accidentally. It all hinged on my interest in books and materials so in a sense it is related. How does my experience help me? It is helpful especially when it comes to a bibliographic concern, usually toward the end of the process. One of our problems is in finding out from the owners of the materials how they want the book titled. What should the title be? Should we follow the title on the bindings as it came to us? We often have to research or suggest to the client what should be put on the finished binding. I suppose my familiarity with the reference tools has been helpful. As I said before, I was particularly lucky—I came along at just the right moment. Even though there is a great need for people in the field, the opportunities still seem somewhat limited for training. Pam [Darling] mentioned earlier the program at Columbia and, if that's successful, we can hope there will be more programs in the future. I think if you're interested in this field you just have to be persistent. If you want to do something, you can do it.

*Heinke Pensky-Adams* (Monastery Hill Bindery, Chicago, Illinois): I might be able to fill in on this a little bit, because I would like to say that any librarian who is interested in the field, should be persistent, as Louise

said, in trying to learn as much as possible. It is very difficult to find apprenticeships in this country. It is, therefore, very frustrating. A long period is involved in order to learn everything. But be persistent because we need every hand possible to do the job that needs to be done. There's so much material that has to be treated and should be treated more or less immediately.

*Nancy Gwinn* (Research Libraries Group): The Library of Congress has, at times, been quoted as saying that it could cost up to \$300 a volume to restore a book. I wonder if you could state a range of average figures?

*Kuflik*: There is *such* a range of possibilities! When you say an average book does that mean reweaving or does it not? What type of binding is it? Is it a cloth binding; is it a leather binding? How big is it? How many leaves? It's impossible to give a figure without knowing specifics.

*Gwinn*: Let's say that it's an average 300-page monograph with a cloth binding requiring deacidification but doesn't have any unusual restoration properties.

*Kuflik*: But how is it being deacidified? Is it being aqueously or nonaqueously deacidified? Is it being resealed?

*Gwinn*: Realizing all this, I wondered if you could give a range. Is it \$100 to \$500; or is it \$200 to \$300; or \$50 to \$100?

*Kuflik*: It's really almost impossible without having the material in hand. Perhaps the backbone of the whole field is the ability to estimate accurately. We keep very detailed time records for all different types of treatments based upon size. Mrs. Horton has graphs—e.g., of a 6½-inch leaf and an 8-inch leaf and the time it takes to mend. Somehow you have to come up with an estimate by looking at the book and deciding what it is you're going to do. I think one of the things that we've been doing more often is citing alternative treatments. Rather than just saying "This is what should be done," we say "If you can't afford to have this done maybe you will want to have a box made." Or we give the alternative between a cloth binding and a leather binding. So, there is some range there from which the client can select. It's expensive work. It will certainly cost more than \$100. After that, there isn't much I can say.

*D.W. Krummel* (Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign): The antiquarian book sellers say they are selling more and more to private sellers and less and less to institutional collections today. Would you care to comment on this? Is it your experience that you are doing less work for institutional collections and more for collectors now? Or is this something that Carolyn Horton herself handles?

*Kuflik*: It would be more up Mrs. Horton's alley but I haven't noticed any particular change in recent years.

*Krummel*: A related question that comes out of this that I wish might be considered here today is how many libraries are considering reinstating their own on-the-premises binding and conservation units? What are the considerations that might be involved in such efforts?

*Pensky-Adams*: I think I would like to say something on this. Listening to you librarians and to your problems during the last few days, I have a feeling that the private conservator gets only a little drop of what the problem really is and what you're trying to do in your libraries. Therefore, I would like to suggest that we have a closer relationship with each other to work out the problems and to cut out little processes in having things done. For example, I think libraries can have an inside shop which does minor repairs and cleaning, but the major work should be done by conservators because they have the bench experience and the training and they know how to approach the problem.

*Alan Calmes* (National Archives): In regard to Mylar encapsulation, there's a debate whether or not to seal up the page entirely or ventilate at a corner. What are your thoughts about that?

*Kuflik*: There are pros and cons. I assume that since the Library of Congress currently has two of these sealing machines, two different varieties, that they have come to the conclusion that it's okay to completely seal the envelopes although with these machines you could also, I'm sure, leave a slight gap to permit some passage of air. Of course, this is one of the reasons why it should be deacidified prior to encapsulation. If you're not deacidifying the material, you're not talking about the same thing. Material should be deacidified and certainly should be completely dry at the time of encapsulation. I would leave to the scientists the question as to whether there should be a complete sealing or not.

*Walter C. Allen* (Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign) to *Calmes*: You raised the question; what's the difficulty? I think there are those among us who are not aware of the problem.

*Calmes*: You trap in the products of degradation if you do seal it up entirely. If it is deacidified, then, probably you can seal it up entirely, but it is good to caution people that if you do not deacidify, you probably should not encapsulate and if you do encapsulate, then you should leave some ventilation. Maybe you should take it out and air it out from time to time.

*Kuflik*: That's redoing the whole process.

*Keith Dowden* (Purdue University Libraries, West Lafayette, Indiana): I'd like to hear something more about reversibility. Some processes, I assume,

would be only partially reversible. To what degree are they reversible? And what is the great need for this in your work?

*Kuflik:* The feeling is that, since we are dealing with materials of some intrinsic value, should the materials that we're using at the current time not be as stable as we are assuming they are, we can reverse what we've done. We can remove what we've added if we find that there's a more suitable material that comes along in the future. In other words, we can change whatever we've done to the item if necessary. Most of the processes are completely reversible. The heatset tissue, which might be the material that would be most called into question, is reversible only if the item can be treated with water or alcohol and so you've got to determine whether the item that you're lining or mending with this can be subjected either to water or alcohol. It's sort of one of the time honored principles in the field of conservation and probably harks back more to paper supported works of art where it is even of greater concern than with books. But this is one of the principles: what you can do to the material you can undo to the material and it will be in the same condition as it was before.

*Dowden:* I was thinking about binding, and possibly, rebinding.

*Kuflik:* The binding itself is usually fairly easy to remove. The adhesives that we're using are generally reversible. After all, in the process of rebinding, in any case, we have to clean off the spine before we start rebinding. We can remove the binding every easily. We will probably destroy it, but it can be removed.

*Amodeo:* This is a sort of hypothetical question. Say that you have someone coming in saying, "I'm going to give this particular book that has been in the family for so many generations to my grandchildren." Assume it's an early nineteenth-century or late eighteenth-century Germantown Bible, or something similar and they would like a nice brand new leather cover all gussied up with ornaments, etc. Would you try to dissuade them from destroying the book as it is other than perhaps doing a little needed structural correction, and perhaps try to preserve the book by putting it in a box rather than just rebinding the whole thing as they had asked? Or lacking that, would you photograph it and send a copy of the binding to a local research library? Do you have any sort of contingency plan if the person insists on rebinding it?

*Kuflik:* No. But if they wanted it rebound in full leather and they heard what the cost would be, that might discourage them. There are so many factors. People all love their family Bibles and usually, of course, they are very large books, as you all know.

*Amodeo:* I'm talking about something unusual of binding interest, something extraordinary, in fact. If you ran across something extraordinary

would you ask the patron if you could photograph the item because it was very different from anything you had ever seen? Or, maybe, I'm suggesting that if there is a research library of some sort that you might be in contact with, that you might establish a file of photographs of this sort of thing before they get covered up again with new leather especially if there is something unusual or of particular historic binding interest that you have run across.

*Kuflik:* We don't maintain any contact as you're suggesting. An instance of that really has not arisen. I'm sure the owner of the material would probably have no reason not to permit it to be photographed. I can't possibly see why. If it's possible to restore the binding especially if the binding has some intrinsic value, we prefer to restore or refurbish it, but if it's no longer protecting the book and the book is no longer usable with the boards, then in that case, we might suggest either rebinding, or, possibly rebacking. We do try to encourage that. I think most people who value this type of material, value the nature of their material, too; otherwise they would not bring it to us. So, I think they would favor that solution if at all possible.

*Robert J. Adelsperger* (University of Illinois at Chicago Circle): It's generally believed that conservators should tell us how to do things, what might be done, and as you say, give us alternatives, but that curators (and Paul Banks has said this frequently) must decide what the priorities are—what things should be conserved and preserved, what are important bibliographically, and so forth. To follow up with Tony's [Amodeo] point, though, are conservators ready and able to advise curators (many of whom will not be experts in the history of binding styles, etc.), as to the proper type of treatment if rebinding is necessary—e.g., shall it be a binding relating to the period? Can curators expect that sort of service from conservators?

*Kuflik:* Yes, I think we would make every effort. As I said, we have a fairly extensive reference collection. And we would do so, especially if the curator expressed an interest. It's up to the curator to inform the conservator what he or she would like; the conservator can then respond to those needs.

*Peter Chang* (Florida State University, Tallahassee): I would just like a few words from personal experience. Last year we sent fifty rare books to a company, which sent its representative to us. He told us how much it would cost to do each process. We added it together and figured that we could afford such treatment. Then, they sent us a shipment. I think they averaged about \$150 each. We found this too much to spend. Then we found out about another binder who said he could do hand binding. We thought this, too, would be too expensive but he gave us a list—e.g., leather

is \$16; if you keep the spine, it is \$12. He tells us this is hand binding. Why the price difference?

*Kuflik:* What was the quality of the materials he used?

*Chang:* With the first binder, we were happy. He restored quite well. It's quite a good job but that cost us \$150 a volume. As to the second one, the first shipment is just on the way back.

*Pensky-Adams:* How can he do a leather binding for \$12 when a foot of leather on the market is already between \$12 and \$15?

*Kuflik:* As a rule they're talking about commercial binding as opposed to hand and conservation binding. I don't think they treated the inside of the book either. The quality of materials must be considered. I think it's up to the curator to question the binder as to the quality of the material being used on the books. Are the end papers acid-free? Are they using good-quality cloths? Have the leathers been subjected or approved? There's a test called the PIRA test that most conservation binders use. If the curators express an interest I don't think the conservators would mind at all answering these questions.