

University of Chicago Library Conservation Documentation  
By Melina Avery, Book and Paper Conservator

Here are some screen shots of our FileMaker Pro documentation forms, two single-item and one list format. I also keep my own parallel documentation, with a little more detail, on an Excel spreadsheet. A screen shot of that is also attached, and an example of a full-on treatment report for an especially complex project.

Projects - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW ACROBAT

Clipboard: Paste, Cut, Copy, Format Painter

Font: Calibri, 10, Bold, Italic, Underline, Text Color, Background Color, Wrap Text

Alignment: Merge & Center

Number: General, Currency, Percentage, Decimals

Styles: Normal, Bad, Good, Neutral, Calculation, Check Cell

Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select

|     | A         | B    | C | D  | E   | F  | G         | H         | I          | J           | K   |
|-----|-----------|------|---|--|---|--|-----------|-----------|------------|-------------|-----|
| 587 | 87897690  | 1090 |   | Large leather-bound volume, 1775. Textblock split at first section. Spine piece missing, replaced with a large book tape reback. Original label has been retained. Endbands lost.  | Repair textblock as necessary. Replace endbands. Rebind in full leather. Reattach bookplates and label. | Detached pages hinged back onto textblock. New double folio endsheets sewn on to textblock. New endbands sewn and attached in colors indicated by evidence in the textblock. Rebound in full calf leather with minimal blind tooling similar to original. Label reattached. Bookplates reattached.   | 2/19/2018 | 7/27/2018 | 23.5 hours | Out cabinet | yes |
| 588 | 90007490  | 1115 |   | Octavo-sized half-leather volume with marbled paper sides, 1743. Very weak board attachment. Endbands missing.   | Paper reback. Replace endbands.   | Paper reback with Moriki toned, using acrylics, to match leather. New endbands sewn to match evidence of originals. New gold-stamped leather label.  | 6/5/2018  | 7/27/2018 | 8 hours    | Out cabinet | yes |
| 589 | 68687432  | 1116 |   | Octavo-sized leather-bound volume, 1755. Back board full detached, front board loose. Headband missing.  | Paper reback. Replace endband.  | Paper reback with Moriki toned, using acrylics, to match leather. New endband sewn to match tail. New gold-stamped leather label.  | 6/5/2018  |           | 7 hours    | Out cabinet | yes |
| 590 | 61631298  | 1120 |   | Octavo-sized leather-bound volume, 1570. Textblock cracked. Headband missing. Front board detached. Old tape hinge repairs and book tape at joints.  | Remove old repairs. Repair sewing. Reback. Replace endband.   | Old repairs removed - tape at hinge with methyl cellulose poultice, joint tape was removed mechanically. The two sections of the textblock were sewn back together. Headband sewn to match tail, and attached. Boards reattached with new hinges tucked under pastedowns. Paper reback with Moriki toned to match the leather. New gold-stamped leather label. | 6/5/2018  | 7/27/2018 | 7 hours    | Out cabinet | yes |
| 591 | 112308295 | 1139 |   | Quarto-sized publisher's binding, 1902. Front hinge broken. Hole in the front, either from gouging or a bullet (BB?).  | Repair front hinge.   | Front hinge repaired using paper tucked underneath lifted pastedown.   | 7/26/2018 | 9/11/2018 | 4.5 hours  | Out cabinet | yes |
| 592 | 114245508 | 1138 |   | Fabric-covered library binding, 1910. Barcode and spine label stickers stuck on with pressure-sensitive adhesives.   | Remove stickers, reduce adhesive residue.   | Stickers removed using a heated spatula to soften adhesive and remove carrier, and a crepe eraser to reduce adhesive residue.  | 7/26/2018 | 9/11/2018 | 2 hours    | Out cabinet | yes |
| 593 | 61641261  | 1132 |   | Thick octavo-sized leather-bound volume, 1545. Boards loosely attached, partially held on by blue repair tape covering otherwise-exposed textblock spine and leather on board edges. Blue paper on spine has inscriptions and cannot be removed. It has worn away significantly, leaving the sewing and cords exposed. | Reinforce board attachment with no loss to blue paper repair.   | Board attachment reinforced with inner hinge and crease mends, made of thin Japanese paper. Toned on the outside with pastel powder to blend with visible textblock spine.   | 7/26/2018 | 9/11/2018 | 3.5 hours  | Out cabinet | yes |
| 594 | 112308407 | 1137 |   | Quarto-sized leather-bound volume, 1922. Back board detached. Decorative style and brightly-colored leather, as well as time period, indicates that the materials may be weak.   | If the leather or endsheet can be lifted, reattach the board.   | Back board reattached with Moriki hinge tucked under the pastedown, and Moriki joint tucked under leather.   | 7/26/2018 | 9/11/2018 | 3 hours    | Out cabinet | yes |
|     |           |      |   | Quarto-sized half-leather volume with decorative paper sides, 1799. Spine piece split from board at  |   | Joint repaired with Moriki, tucked under leather, and toned using acrylics to better   |           |           |            |             |     |

**Items Delivered from Conservation**

Received by \_\_\_\_\_

Date \_\_\_\_\_

**GO TO CHECK IN**

| Item                                   | Date in/Out                    | Treatment Summary   | Item number |
|--|--------------------------------|---|-------------|
| PR 3662.1755<br>Collection of the      | 3/30/2018<br>8/22/2018<br>SCRC | Rebacked using Japanese tissue and wheat starch paste toned with acrylics. New headband to match tail, new endsheets.                                     | 1116        |
| Pr 1365.T2 v.1 1710<br>The tattler     | 3/30/2018<br>8/22/2018<br>SCRC | Rebacked using Japanese tissue and wheat starch paste toned with acrylics. New label.   | 1117        |
| Pr 1365.T2 v2 1 1710<br>The tattler    | 3/30/2018<br>8/22/2018<br>SCRC | Rebacked using Japanese tissue and wheat starch paste toned with acrylics. New label.   | 1118        |
| Pr 1365.T2 v3 1 1710<br>The tattler    | 3/30/2018<br>8/22/2018<br>SCRC | Rebacked using Japanese tissue and wheat starch paste toned with acrylics. New label.   | 1119        |
| PA 253.C6 1570<br>Effigies aldi...     | 3/30/2018<br>8/22/2018<br>SCRC | Old repairs removed, volume partially re sewn. Paper reback using Japanese tissue and wheat starch paste toned with acrylics. New headband to match tail. | 1120        |
| PR 3714.T8 v.1 1763<br>Tristram Shandy | 3/30/2018<br>8/22/2018<br>SCRC | Rebacked using Japanese tissue and wheat starch paste toned with acrylics.  | 1121        |
| PR 3714.T8 v.2 1763<br>Tristram Shandy | 3/30/2018<br>8/22/2018<br>SCRC | Rebacked using Japanese tissue and wheat starch paste toned with acrylics.  | 1122        |
| PR 3714.T8 v.3 1763<br>Tristram Shandy | 3/30/2018<br>8/22/2018<br>SCRC | Item disbound, guarded and re sewn on handmade linen cords. Rebacked using Japanese tissue and wheat starch paste toned with acrylics. New endbands.      | 1123        |

### CHECK IN - NOT FOR PRINTING

**New - date in** 2/2/2018 **Call number** PR 3542.L8 1775 **Conservator** M. Avery

**Date out** 8/22/2018 **Multivolume**  yes  no  see volume 1 **Owning library** Crerar

**needs doc shot**  yes  no **Author** **Year** **Title** **Contact**

**Barcode** **Item number** 1090 **FIND ITEM** **full leather** **acrylics** **1/4 leather**

**GO TO PRINT LAYOUT** **GO TO DELIVERY LIST**

**Proposed treatment**

Rebind, full leather.

**Actual treatment**

Rebound in full leather, new endsheets, new endbands, bookplates reattached, original label reattached.



**Hours** 24

**Housing**

no housing  tux box  
 phase box  pamphlet  
 hinge box  clamshell

CHECK IN - NOT FOR PRINTING

**New - date in** |  **Date out**  
 **Call number** |  **Conservator**  
 **yes**  **no**  **see volume 1** **Multivolume** |  **Owning library**  
 **Author** |  **Collection**  
 **Year** |  **Contact**  
 **Title**  
 **Barcode**

**needs doc shot**  **yes**  **no**

**Item number**

GO TO PRINT LAYOUT

GO TO DELIVERY LIST

FIND ITEM

full leather

acrylics

1/4 leather

**Proposed treatment**  
 Reback? Or mend spine?  
 Paper and cloth reback?

**Actual treatment**  
 Paper reback, reinforced with extra Japanese tissue and wheat starch paste, toned with acrylics. Joints reinforced.



**Hours**  
**Housing**  
 no housing  tux box  
 phase box  pamphlet  
 hinge box  clamshell

## **Treatment Proposal for MS ff 967**

**Melina Avery**

Collection: University of Chicago Library, Special Collections Research Center

Title: Antiphonary

Country of Origin: Spain

Date: est. 16<sup>th</sup> century

Measurements: 33 x 21.5 x 5"

Weight: 52 pounds

### Description:

Thick wooden boards covered with dark brown leather. Leather is tooled (note: tooling looks like it may be more recent than 16<sup>th</sup> century) with large brass corners and center bosses. Each board is missing one center boss, and back board is missing one brass corner. Given the size of the volume, it would be interesting to know about the animal that the enormous piece of cover leather came from. Presumably it was an ox or other very large bovine.

A note on the size: this is the largest volume in Special Collections, and is known as a "whale folio." It's too heavy for one person to lift, and the logistics of moving and handling it will probably be the most challenging part of this treatment.

Pages are thick parchment. 77 leaves. Numerous historic repairs. Some are parchment patches adhered to the pages, others are tears that have been sewn up, in some tears with sinew and in others with linen thread. The pages are also enormous so, again, it would be interesting to know what animal they came from, and how many. Just given the size, it must have been several dozen full-grown cows.

Pages feature handwritten music manuscript notation and Latin writing, in black, red, blue and yellow ink. Dry point lines also feature, as vertical frame lines and for the text.

The individual parchment leaves are in disparate states of repair and preservation. Damage between leaves isn't at all consistent. This is presumably due to the volume being left open to a certain section for long periods of time.

The textblock was sewn through the fold in gatherings of 3-4 folios. Evidence remains that the textblock was once sewn on cords: eight sets of double cord stubs remain at the joint. There is also remaining evidence of an alum-tawed spine liner. Fragments of it remain, still adhered to the spine leather or tucked under the pastedown.

Evidence of original sewing thread (very thick, probably linen) remains as well. Some of it is still, despite being in fragments, bent up towards the head and down towards the tail, or between

sewing stations. The latter is to be expected, but the threads bending towards the head and tail could indicate a sewing structure that incorporated functional endbands.

The textblock was re sewn at some point, unsupported, and reattached to the case with fabric spine liner. The exact date of that repair is unknown, but it appears to date from the late 19<sup>th</sup> or early 20<sup>th</sup> century. That system failed, and now the sewing is partially broken and the case, while intact, is fully detached from the textblock. There are multiple pages and sections that are detached, and may or may not be tucked in where they belong. The page order should be double-checked by the music librarian before any re sewing takes place. The file on the manuscript indicates that it was re-ordered in the past, so this may be complicated.

The textblock spine is covered with adhesive and a fabric spine liner that looks like buckram. The adhesive may be animal glue (more likely) and/or PVA.

#### Treatment Proposal:

Surface clean, with rubber sponge eraser. The pages are soiled enough to leave a user with grimy hands after handling the book.

Disbind. If the adhesive all over the spine is animal glue, this should be possible with minimal use of water/poultice to soften the adhesive, remove the fabric spine liner and separate the sections.

Mend and guard as necessary, not removing any historic repairs. Gelatin mousse and Goldbeater's skin or Okawara Japanese paper should be adequate for any necessary repairs or reattachment of fragments.

This would be the best point to digitize the manuscript. It will be easiest to photograph between disbinding and re binding, when the pages can be easily handled and laid flat. Conservation and Digitization can coordinate to fit this step in at this point.

Resew on thick double linen cords. As previously noted, the page order should be double-checked by the music librarian before any re sewing takes place. The thread originally used was much thicker than any linen thread that we would typically use, so an extra-thick thread should be ordered to use in re sewing.

Replace endbands, using the same thick linen thread, to match the original.

New parchment endsheets could be sewn in, but there is a danger that any added bulk in the textblock could result in the case being too tight to reattach.

If the leather can be lifted at the joint area (and it seems from initial testing that it can be), the new cords can be laced into the boards for an extremely strong board attachment.

The missing back board corner boss could be replaced. It is quite heavy and thick, so this could be a challenge.

### Special Considerations:

A system of moving and handling such a heavy volume will be needed: a moveable table or set of carts with locking wheels that it can be kept on for the duration of treatment, to minimize the number of times that teams of conservators have to move it from table to cart or vice versa. The length of the book (33") is too wide for the door to the secure vault where it will be kept overnight, so if we want a platform large enough to hold the open book, it will have to be a cart that is adjustable to the same height as a table we already have in the lab.

A very large sewing frame will have to be built. This could be built, in components, into a cart that the book will be kept on. The components could be set in place when needed, and removed and stored elsewhere when a plain platform is more useful.

As previously noted, we will need to order extra-thick linen thread for resewing.

If new endsheets will fit in the case, unusually large parchment will need to be ordered. Parchment of the appropriate size and quality may or may not be available.

### Notes from examination and observations made during treatment:

The leaves are numbered only on the recto, and go from 1-59, 222-230 and 204-218, in that order. This information is in the codex data sheet from SCRC, but is reiterated here because it's relevant to the conservation process. Leaf numbers are based on that pagination, not on conservator's temporary collation for keeping pages in order during treatment.

Leaf 32 may be missing. The pagination goes from 31 to 33 but according to Scott Landvatter (UChicago Library music librarian), the chant continuation between pp 31-33 is consistent, so this may just be a pagination mistake.

Leaves 35, 39 and 42 are missing.

Leaves 227, 228 and 229 have been cut out, but are placed in the volume in the correct location. The stub corresponding to each leaf has been previously labeled with the leaf number, so reattaching these leaves in the right place will be simple.

The folios aren't full sheets of parchment like we thought. They are two smaller sheets of parchment, adhered by stub with hide glue at the fold. This means twice as many and potentially much smaller animals were used for the parchment. Not necessarily full-grown calves; could be calves, sheep or goats.

There is decorative lettering on leaf 222 recto, which has been cut off at the top edge of the sheet. This could indicate that the book was trimmed to fit into a new case at some point. Green edge decoration is intact over the cut edge, so the edge decoration was applied overall after any trimming that happened.

Evidence of the original sewing structure can be found in the folds – holes that correspond to the sewing stations in the case, and small sections of the original thick double cords. This is evidence

that the book was in fact once sewn into the case, and that it was not, as the codex data sheet surmises, simply placed into it unsewn.

The areas of tooling on the boards have a slightly tacky feeling, have gathered a lot of dust and dirt on the front board, and show visibly brush marks in this tacky, grimy coating. Under long-wave UV, the tooled areas fluoresce brightly compared to the rest of the leather. The tooled areas on the spine and back board do fluoresce and feel tacky as well, but they are not grimy. All of the tooled areas were presumably coated in a wax, oil or other leather treatment, but the front board has gathered the most dust and grime.

## **Treatment Report for MS ff 967**

**Melina Avery**

**9/26/2018**

The textblock was examined, with the help of the music librarian, to make sure all the detached pages were in the correct location. Then the pages were collated, using pencil.

The parchment leaves were surface-cleaned with a rubber sponge eraser, carefully avoiding the delicate media, in order to clean the parchment without causing any damage. The pages were cleaned until visible surface soil was significantly reduced and handling no longer resulted in grimy hands or gloves.

The textblock was disbound, which required softening and scraping away a thick layer of hide glue. The glue was softened with heated gellan gum poultices, using the following technique. Thin 2% gellan gum poultices were made and cut to rectangles about six inches long, and the width of the textblock spine. A poultice was heated in a water bath, in the microwave, to about 140 degrees Fahrenheit – the temperature required to soften and dissolve hide glue. The gellan gum poultice starts to dissolve in the heating bath if it gets much hotter, so this was as hot as we could get the poultice. It then had to be positioned very quickly before getting cold. The poultice was pressed against the textblock spine, and wrapped tightly to the spine, using cling wrap. A heating pad was then wrapped around the poultice to keep it warm, with weights to hold it in place. The essential elements were good contact with the poultice, and consistent but gentle heat.

After one to three hours of contact with the warm poultice, the glue would be soft enough to begin to scrape away, and to peel away the fabric spine linings. This could be done about six inches at a time, because the glue would not stay warm and softened for long. We tried multiple techniques, with larger areas under poultice at once, and with a beaker warmer meant for lab use, but these experiments were less successful than working as we did, with a smaller poultice and gentle but steady heat.

After the thickest glue layers were removed and the textblock sections separated, the outer fold of each section was still too stiff with glue to safely mend and resew. The remaining glue was softened by direct brushing with hot water, followed by mechanical reduction using a microspatula.

The pages were mended as necessary, not removing any historic repairs. Goldbeater's skin, which is the processed membrane of an animal, typically an ox, was chosen to use in mending. It is transparent so it will not obscure the page, and it is a strong, flexible carrier for mends and small fills. Both Goldbeater's skin and the tested adhesives are proteinaceous materials, which bond better with the proteinaceous parchment textblock pages than a cellulose-based adhesive like wheat starch paste would, and will be compatible in the ongoing life of the book. Three strong, reversible, stable proteinaceous adhesives were tested on new parchment: gelatin mousse, warm gelatin, and highly purified hide glue. These were tested to determine optimal materials and technique, with a preference to use the weakest adhesive, gelatin mousse in this case. Gelatin mousse is room-temperature gelatin, normally a stiff gel but in this case forced through a sieve

until it's easy to work as a paste or "mousse." It is weaker than warm gelatin, and more controllable. Gelatin mousse and Goldbeater's skin on one side of the parchment was adequate for edge repairs and reattachment of fragments. Warm gelatin and Goldbeater's skin on both sides was necessary for reattachment of the leaves that had been sliced out. Use of hide glue was unnecessary on the textblock.

The loose textblock was digitized at this point, as the mended pages were much easier and safer to handle and photograph, than a bound volume of this size.

Thick linen cords, similar in size to the originals, were hand twisted using thick linen thread ordered for use on this book. Most linen thread for bookbinding is much thinner than the thread originally used on this volume, so shoemaker's thread of the correct size was ordered. This size thread was appropriate for making the cords and for resewing. The book was sewn onto eight double-cord sewing stations, in the format that fits the case. Because there is evidence of multiple rebindings in the life of this volume, we had to choose how to reconstruct it. Even though the case is not absolutely original to the textblock, they have been together for a long time and resewing it to fit back into this case is appropriate.

New parchment endsheets were sewn in, with pastedown stubs that can be adhered under the original pastedowns. Luckily, the textblock fits into the case with enough room to spare, so these endsheets did not make the fit too tight. Parchment of high quality in such a large size is not widely available, so the endsheets are a little short on the foreedge, but they will provide good protection and reinforce the board attachment.

After measuring, endbands were not added. The textblock is nearly as tall as the case and large endbands would protrude. It is unknown how the originals were worked, as there is evidence of their former presence but they are lost and have been since before the book came to the University of Chicago.

The textblock was pressed for several days to ensure it could fit neatly back into the case. An extended spine lining of thick cotton fabric was adhered, using hide glue, in between the cords. The spine was then lined using handmade paper, adhered by hide glue, also between the cords. The very bumpy cord areas were lined with more flexible Okawara Japanese paper, adhered with thick wheat starch paste.

The leather covering material and the parchment pastedowns were lifted to expose the channels where the original cords were laced through. The old cords were removed so the new cords could be laced into the boards, using the same channels, for an extremely strong board attachment. The new cords were laced through and adhered in place using thick wheat starch paste. The original cords had been frayed and adhered to the board on the outside, under the leather, so the new cords were as well, using hide glue.

The cotton fabric extended spine lining was also adhered to the case, between the leather and the wooden boards, using hide glue. The pastedown stubs were molded to the exposed inner boards by dampening the stubs with a sponge then positioning them, drying in situ under weights. Once

the parchment stubs were molded to their new position, they were adhered in place using hide glue. The original pastedown was then re-adhered over the stub, also using hide glue.

The original volume was tightback, meaning the leather spine was directly adhered to the lined textblock spine. We chose not to risk damaging the original spine or to lose access to the spine, so the case was not adhered to the textblock at the spine. It was left “baggy back.” The laced-in cords, cotton fabric extended spine lining, and sewn-in pastedown stubs should be adequate to keep the textblock and case securely connected. This way, researchers have access to a fully intact case, not permanently adhered to the textblock, should they want to access hidden elements of it.

The case was in excellent condition, but it did have a tear in the leather at the front joint, from the head down about six inches. The tear was mended using Moriki, a colored Japanese paper, which matches the color of the leather, adhered with PVA. The Moriki was toned using acrylics.

#### Equipment:

Note: Ann Lindsey was responsible for conceiving and building the special equipment needed for this project.

A cart was ordered in the appropriate dimensions, narrow enough to fit through our lab doors but wide enough to fully support the book. It has locking wheels and a wooden platform that could be customized to fit our needs. It can be adjusted to the same height as a large table in the lab, so the book can be more easily handled, opened and moved.

A very large sewing frame had to be built. This was built, in components, into the cart that the book was kept on during treatment. The components can be set in place when needed, and removed and stored elsewhere when a plain platform is more useful. The sewing frame was simply a larger version of a traditional frame, but modular and with one extra element – a magnetic crossbar. The frame required a channel to be sawn into the platform, for the cords to be stretched down though and secured. Threaded holes were drilled through the frame at the corners near the channel to accommodate the sewing frame posts. Two posts screw into place, and two crossbars are secured between them using threaded wooden pieces for the crossbars to sit on. The lower crossbar, found on every sewing frame, is for securing the cords. The higher crossbar, an innovation for this large frame, has a thin metallic strip nailed on, so that it can be used with magnets. The textblock is so large, the pages must be held up somehow to allow for access to the gutter during sewing. Magnets are a safe and easy way to accomplish this. Strong rare earth magnets were embedded into wooden balls, which make the magnets much easier to handle. Some of the sections with fewer pages only needed two magnets to stay up, but the thicker sections needed five.

This frame could be retrofitted as a large book press as well. A press was very important for this textblock, since it had to fit back into an intact case, and cutting the joints of the leather cover to accommodate swell would be undesirable. To make the sewing frame into a press, additional threaded holes were drilled into the corners so all four corners had threaded holes. A Plexiglas

sheet of the same size had holes drilled in the same places, so threaded posts could support it in place. It was set over the textblock as a weight, and threaded wooden pieces were screwed onto the posts to hold the Plexiglas tightly in place.

This equipment was highly successful, allowing the book to be safely moved around, stored, resewn and pressed, without having to improvise temporary and imperfect solutions. We can reuse it with our next whale folio project, which will save time in the future.

#### Housing:

We were inspired by the “sled” housings that conservation staff at the Newberry Library in Chicago has designed for their large collection of antiphonals. Ann Lindsey built a large, double-layered sled out of Coroplast – polypropylene corrugated plastic – so the book, which will be stored flat in the Special Collections Research Center, can be slid on and off the shelf without direct handling. The book sits on an acid-free cardboard bed to protect the Coroplast from getting crushed by the large brass bosses. The sled has handles at the head to more easily grab and slide it, as well as a smooth texture that will slide easily against a metal shelf. Three sides of the sled have walls the height of the book, but the tail of the sled is open to more easily pull or lift the book out. It has a Velcro strap to prevent the book sliding out accidentally, but this is very unlikely given the book’s weight.

Treatment time (not counting Ann Lindsey’s time spent making equipment and housing): 166.5 hours