

Book Repair in a Digital World

Jackie BenEfrain

Description: Today, most people think that if a book is damaged, it's time to throw it out as everything is online. Most librarians treat damaged books by slapping tape on them. Over time, these repairs end up doing more harm than good as the tape oozes onto unintended surfaces and is nearly impossible to remove. The tape also puts undue pressure at the point of repair, causing other parts of the book to begin to fall apart from the stress. During this session, Jackie will teach participants how to make wheat starch paste to use with Japanese paper to mend and hinge-in pages, as well as how to tighten spines of books. These repairs conform to modern conservation practices as being both durable and reversible. Due to time constraints, participants *will not* be taught how to completely rebind a book, which often is not cost effective and should only be done on non-valuable books that are not replaceable in either digital or book formats. This class would be of interest to both SSC and RAS librarians.

Jackie Ben-Efrain attended JTS Joint Program and then continued at Columbia University School of Library Science in the 1970s. Following an odd set of circumstances, she only really began her work in the library field with the position she currently holds at American Jewish University in 2007. She took classes in book and paper conservation from Holly Moore, Head of Conservation at the Huntington

Welcome to my book repair clinic, where I will teach you how to doctor to your books. Before you run to call the IRS, I want to give you an overview of what I would like to cover in this hour, which was taught to me in 15 hours. Because of the time constraints, this will not be a hands on class, rather a brief demonstration of quick repairs that can be made cheaply on your circulating and reference collections. Please do NOT attempt to make any repairs on any rare or valuable books, I don't even make those repairs, leave that task to the professionals.

What you CAN do for a rare book, or a book that needs more fixing than you can handle, you can always quickly make a "phase box," called so because the book is going through a phase awaiting your decision to repair or replace it, or simply leave it the way it was. Remember, all of those marks and tears tell a story, remember *The People of the Book* by Geraldine Brooks? I like to label each piece, putting the spine label where it normally goes, and then the long label on the other half. You can order the supplies for this from Gaylord or Brodart, and the \$5.00 you spend will be far less than taking the time to repair the book properly.

Speaking of money, the good reason to make quick repairs on your circulating collection is that the \$5.00 or 5 minutes you spend repairing an item will cost less in materials and staff hours than it would cost for you to order, receive and label a new item. Another good reason to repair an item is that it may no longer be available for purchase.

Many of you might ask, why not just slap some tape on an item? That's fine for a paperback, but I altogether hate tape, including book tape. How many of you have picked up an item from the shelf that is sticky from old oozing tape, tape that has already attached itself to the next book on the shelf? No one likes that. Also, I'm sure you've all seen old, yellowed tape which is cracking, you can't pull it off and now you're wasting

more time with another repair. All of the repairs I'm teaching you are totally reversible. However, the main reason you don't want to use tape is that it created pressure wherever you place it. We all know that pressure is not good for your health, or that of your book! It will rip again, more pages will fall out, or it will wrap. It's like botox, once you start with tape, you have to keep up a constant maintenance schedule.

Let's get started making repairs. Please turned to the attached handouts.

1. Next, let's start with the easiest repair, humidifying and flattening a page within a book. You can also rehydrate or dry pages with special blotter paper called Zorbix <http://www.artifexequipment.com/zorbix.html>
2. Hinge tightening with PVA
3. Tipping-in leaves
4. Complete flattening
5. Scarf Tear
6. A word about cooking wheat paste...not from Persian market, don't cook too long or too much, use mister to rehydrate
7. Japanese Paper Repair
8. Hinging In

Go to this link: <http://tinyurl.com/BookRepairatAJL>

**Introduction to Book Repair
for Circulating Collections
June 22, 2014
AJL Annual Conference**

Page Repairs

Materials needed:

PVA
Wax paper or silicone release
A small glue brush
Olfa or Exacto knife
Needle or awl
Metal engraving tool
Bone folder
Japanese tissue
Wheat starch paste
Small piece of mat board
Small piece of blotter
Japanese paper like Kizukishi

1. Procedure for scarf tears

When paper is not cleanly cut, a tear may have overlapping areas of paper. This overlap can be mended with PVA.

1. With waste paper beneath the tear, identify the top and bottom of the tear.
2. With a small brush *lightly* glue the inside of the overlapped tear.
3. Rub down with a bone folder.
4. Put two pieces of wax paper on either side of the tear and close the book.
Keep under weight until dry.

Limitations: Some tears do not have enough overlap to make a strong mend. Mend this type of tear with Japanese paper.

2. Procedure for cut tears

Japanese Paper repair

You may want to make a more invisible mend on circulating collection materials that are older or may be used in an exhibit. For this type of paper mend you would use Japanese paper. First you must tear the paper and your choice of tear will result in differing amounts of fuzziness along the tear edge. The more fibers extending at a 90 degree angle from the paper edge, the stronger the mend and the more invisible on papers with a tooth. The following types of tears can be done and the list is organized from less fuzzy edge to most fuzzy edge:

- A cut tear with an Olfa knife
- A needle or metal engraving tool
- A dry tear strip
- A water tear with a small brush
- A water tear with your tongue

Once you have torn your piece to fit your tear follow this procedure:

1. Paste out the Japanese paper with a small brush and Zen Shofu wheat starch paste on an absorbent piece of card like mat board. Take care to keep the edge fibers at a 90 degree angle from the paper edge.
2. Place Japanese paper on your cut tear or scarf tear with small overlap.
3. Rub down *lightly* with bone folder.
4. Put two pieces of wax paper on either side of the tear and close the book. Keep under weight until dry.

—OR—

5. Dry under silicone release (or wax paper), blotter and a small glass weight.

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Hinge tightening

In those cases where a book has started to fall out of its case, but the endpapers are not torn, hinge tightening is a quick, efficient repair.

Materials needed:

PVA
Plexi rods or size #3 knitting needles
A small glue brush
2 pressing boards and a weight

Procedure:

1. Stand the book open.
2. Brush glue onto a plexi-rod with a small glue brush.
3. Carefully inserting the glued up rod into the hinge area, twirl the rod.
4. Set the book down on the table and open the side where you have just glued.
5. Holding the book open, rub down the inside of the hinge area.
6. Insert a sheet of wax paper before closing the book.
7. Close the book and lightly run the bone folder along the joint of the book.
8. Put a clean plexi-rod or bamboo skewer into the joint of the book and put book under weights (duplicate books) between two pressing boards.

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Tipping-in book leaves

Materials needed:

PVA
Wax paper or silicone release
A small glue brush
Olfa or Exacto knife
Waste paper like newsprint

1. Procedure for single leaves—best for Perfect Bound or Double Fan:

Procedure 1a:

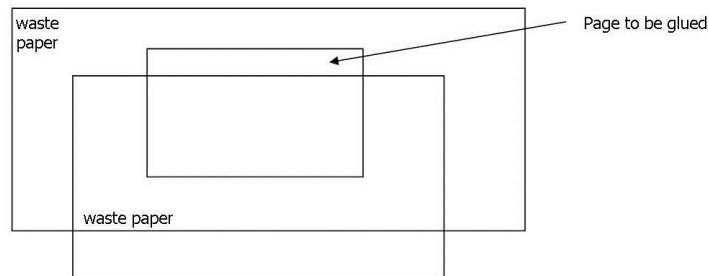
1. Trim any very messy parts of gutter edge of leaf with an Olfa knife.
2. Dot PVA with a finger on gutter edge of leaf. Do not use too much PVA!
3. Place leaf in book with wax paper or silicone release on either side to protect neighboring leaves from PVA.
4. Make sure leaf does not hang out over text block edge—put weight on top.
5. Dry with book closed about 1 hour.
6. Carefully remove wax paper or silicone release.

Limitations: Best for single leaf of books that are not coated paper.

Guiding principle: You don't need a lot of PVA to tip a leaf in a book!

Procedure 1b—Sewn Book or more of a stub

1. Trim any very messy parts of gutter edge of leaf with an Olfa knife.
2. Place gutter edge of leaf between two pieces of waste paper leaving about 1/8" exposed.



Throw waste paper away immediately

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Hinging In

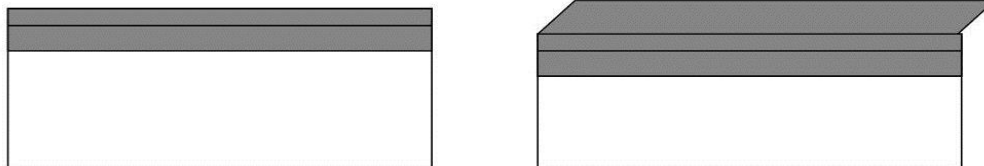
Hinging in a loose or replacement page is an alternative to tipping in. Instead of adhering a loose page directly to the text, you adhere a hinge of Japanese paper to the text and the loose sheet. This allows the page to move more freely.

Supplies:

Japanese paper	Bone folder
Paste	Scrap mylar (book cover material)
Needle tool	Blotter paper & remay (or no-iron interfacing fabric)
Ruler	Weights/glass

Instructions:

- Examine sheet to be replaced to see if edge is relatively clean, crease and tear free. Small tears may be repaired by the hinge. Also consider doing any page mending or overall cleaning before returning the page to the text.
- Using the needle tool or whatever method you prefer for tearing Japanese paper, tear a strip the length of the page to be returned to the text and approximately ½” wide.
- Paste up the strip of Japanese paper on a piece of scrap mylar (or regular waste paper) and adhere half of it to the spine edge of the loose page.



- With remay on top of the paper, lightly rub the Japanese paper down.
- Dry between blotter paper and remay –under weight.
- When dry, remove sheet from the weights and blotter.
- Hold the free end of the hinge back onto the loose sheet.
- Open the book to the place where the page will be returned to the book. Examine where you want to put the hinge—below or above the sheet (either is fine). Text or illustrations may indicate where to put it. If there is a stub from where the page was sliced out, consider using it.
- Paste up the half of the Japanese paper hinge which is not adhered to the sheet using horizontal strokes so as to maintain little fiber “fingers” in the paper.
- Place the sheet on the text aligned to where you want and put a light weight on it, while holding the pasted Japanese hinge up.
- Lay down the spine edge with the hinge on it. Rub lightly with a bone folder with remay in between.
- Depending on how the book opens either: put a remay, blotter and a weight down on the hinge and let dry *or* put blotter and remay on the mend and close the book. Put a weight on top and allow to dry.

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Adhesive Recipes

Every lab or bookbinder has a different recipe for paste—surely no two are the same! The following recipes are what we currently use at UCLA, but experimentation should be encouraged. While methyl cellulose has a relatively long shelf life, starch pastes do not. We find they last around four days before starting to mold. Thymol and other anti-fungal agents may be added to paste, but I choose not to use these given potential health hazards. Some binders and labs use natural additives that they believe make the paste last longer such a clove oil or oil of wintergreen.

Wheat Starch Paste—Jin Shofu (available from Hiromi Paper)

1 part dried wheat starch
4 parts distilled or de-ionized water
(—make small batches)

In a sauce pan, mix the starch and the water together. Stir over medium heat continually. The paste will begin to gel suddenly, at this point stir vigorously. Keep stirring until the paste has become translucent and tacky (for 2 tablespoons of paste, this generally takes between 10-15 minutes in total). The tackier the paste is, the better it will perform. After taking it off the heat, push through a fine strainer. Store in a closed container.

Wheat Starch Paste—microwave recipe

1 part dried wheat starch
4 parts distilled or de-ionized water

Put in a small, microwave safe container. Mix thoroughly. On low heat, cook for 15-20 seconds. Remove and stir. Continue to heat on low and remove every 15-20 seconds for a total of about 2 minutes or until it looks like pudding. Once the paste has begun to gel, stir more frequently until translucent and tacky. After the paste is finished, push through a fine strainer. Store in a closed container in refrigerator.

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7. Close the book and lightly run the bone folder along the joint of the book.
8. Put a clean plexi-rod into the joint of the book and put book under weight between two pressing boards.

Intermediate Book Repair
November 5-6, 2009
LAPNet

Supply & Supplier List

Japanese paper: There are many different weights and names for Japanese paper. Our most common paper to use for lining spines and attaching endpapers is *kizukishi* which we get from both Hiromi Paper and Talas.

Endpapers: We use a medium weight 80lb text paper for this. We ordered a large amount of prefolded endpapers from LBS in "natural". Natural or cream colors tend to look better with older papers, white can be too white.

Spine lining paper (used to line the back of the textblock): We use either 20lb bond or 80lb text paper for this depending on how much lining the spine needs.

Spine lining cloth: LBS cotton stretch

Spine liner/stiffener: This is used for the spine of the case that you're either repairing or reconstructing. We use the red flex board sold by Talas. Other options might include 10pt map folder stock or other flexible board such as a 2pt Bristol board.

Book cloth: There are many options for book cloth. We prefer to use C-CI grade Book Cloth from LBS or Archival Products which meets the LBI specifications for C grade cover material. This is not as heavy as the F-grade buckram used by library binders.

Archival Products

P.O. Box 1413

Des Moines, IA 50306-1413

1-800-526-5640

<http://www.archival.com/>

(book cloth & buckram, protective enclosures, folders, board)

Blick Art Materials

P.O. Box 1267

Galesburg, IL 61402-1267

(800) 723-2787

<http://www.dickblick.com/>

(also many local stores, good for hand tools and some boards)

Conservation Resources International, LLC

5532 Port Royal Road

Springfield, Virginia 22151

Phone: (800) 634-6932

Fax: (703) 321-0629

<http://www.conservationresources.com>

Gaylord Bros.
PO Box 4901
Syracuse, NY 13221-4901
(800) 962-9580 (customer service)
(800) 272-3412 (fax)
<http://www.gaylord.com>
(paper, board, cloth, etc)

Hiromi Paper
2525 Michigan Ave Unit G-9
Santa Monica, CA 90404
1-866-479-2744
(310) 998-0098
(310) 998-0028 (fax)
(Japanese paper, wheat starch paste)

Hollinger Metal Edge
6340 Bandini Blvd.
Commerce, CA 90040
Phone: 800-862-2228
Fax: 888-822-6937
<http://www.hollingermetaledge.com/>
(protective enclosures, boards, paper)

LBS
1801 Thompson Ave.
Des Moines, IA 50316
(800) 247-5323
(800) 262-4091 (fax)
<http://www.lbsbind.com>
(book cloth, buckram, prefolded endpapers, spine lining materials)

TALAS
330 Morgan Ave
Brooklyn, NY 11211
212-219-0770
<http://www.talas-nyc.com/>
(book cloth, paper – both Japanese and Western, adhesives, tools, board, etc)

University Products
517 Main Street
Holyoke, MA 01040
800-628-1912
<http://www.universityproducts.com>
(paper, board, protective enclosures, tools)

AJU BOOK REPAIR

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