Preservation Lab - Examination and Treatment Report

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<th>Database ID</th>
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<td>971</td>
<td>199</td>
<td>notcat971</td>
<td>5/18/2015</td>
<td>Ashleigh Ferguson Schieszer</td>
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Department: 3rd Party Work

Call Number: n/a

Date Returned to Origin: n/a

Title
Hebrew Union College - Seder Haggadah shel Pesah

Author

DESCRIPTION:

General Remarks
This is a 17th century printed text owned by the Hebrew Union College. The title translates to, "The order of the telling of Passover" and is the fourth copy owned by the college. The binding is used frequently in the reading room as a teaching tool for visiting groups of scholars because the copy contains numerous hand colored etchings throughout the text. It is the only copy the college owns that contains illumination. Haggadah scripts are generally dirty, much like this one, because they are historically used to tell stories at the dinner table. As most Jewish text does, this book reads right to left.

Binding
This is a full leather tightback binding, bound in dark brown calfskin. There are decorative gold tooled panels on the upper and lower boards and rolled lines along the board edges. The stiff boards consist of scale board. The endsheets are marbled. There does not appear to be any spine decoration on the remaining leather spine fragments and there are no closures.

Textblock
The textblock is sewn through the fold on eight single cords that are laced into the boards. The sewing thread is a thick white thread. There are no extant endbands. The edges of the textblock appear to be cut.

Primary Support
The textblock paper is a thin soft-sized handmade laid paper.

Medium
The manuscript consists of Hebrew and Aramaic and Rashi script and all are printed in black ink. Throughout the text, at the beginning of a message, large font has been hand colored in either red or blue tempera paint. Throughout the text there are numerous etchings (possibly engravings?) printed throughout the manuscript, as evidenced with metal plate marks. The printed imagery is hand colored with various colored pigments and gold. The hand coloring may be watercolor or tempera.

Attachments | Inserts
There is a Hebrew Union College book plate on the upper paste down. There is a brown ink hand written inscription on one of the lower fly leaves.

Housing
As received, the binding was stored in a off-the-shelf four flap with Velcro closures.
Summary
The binding is in extremely severe condition. The textblock paper is in danger of further tearing, as well as damage to the sewing if handed. The paper is fragile and dirty. Because the binding is broken along the spine and the sewing is loose, the aged and flaking illumination is particularly in danger of pigment loss from abrasion.

Binding
The leather is suffering from numerous condition issues. The leather is degraded from red rot, especially along the spine where most of the leather is lost. Two 2-3 inch small degraded fragments remain. There are also areas of missing leather along the edges of the board that appears to have been damaged by insects. The board corners are exposed and soft from wear. The leather contains scratches.

Textblock
The folds along many of the gatherings are torn. The sewing is extremely loose and broken throughout. The cord sewing supports are extremely brittle. The edges of the textblock are fragile, creased and soft, with dirt accumulation. The sewing thread has discolored from white to brown.

Primary Support
Overall, the paper is extremely dirty and coated in surface dirt. Because the paper is soft-sized, the paper has also absorbed a fair amount of grime and dirt that has become engrained. In addition to the dirt, there are many different types of stains and discoloration throughout the pages, stemming from a range of issues. Many of hand colored pigments, such as the greens and whites, most likely contain metals such as copper that are discoloring the paper support. Other areas of the paper are discolored brown and dark orange from water or oil.

Medium
Overall, the hand coloring is aged, cracking and brittle. Despite the cracking and brittleness, the majority of the hand coloring is in fair condition, with minor areas of loss from abrasion (mostly in the red and green pigmented areas). However, the title page is in particularly poor condition, showing large areas of pigmented loss along the right side in the turquoise painted regions. When viewed under magnification, the paint is actively flaking away from the paper when touched with a soft bristle brush. The blue hand colored script is generally in good condition; however the red coloring is often found smeared through the text, which is most likely evidence of historic use, perhaps at the dinner table. Under ultraviolet radiation, the tuquouise pigment appears to be staining the paper. The black printed text is generally in excellent condition, aside from a few areas where the ink is abraded - or perhaps where it was initially poorly inked when printed.

Housing
Tuxedo Box

Housing Narrative
The four flap enclosure is archival, but does not offer as much protection to the fragile binding as a sturdier box would, such as a corrugated or cloth-covered clamshell.

Attachments | Inserts
The book plate is in good condition. The handwritten inscription located on the lower fly leaf appears stable.

Previous Treatment
It is unclear as to whether the binding is contemporary to the text. There appears to be an area of pigment loss in the front title page that has been in-painted with a turquoise pigment.

Materials Analysis
Test one: The colored pigments were tested for water solubility with a water droplet test. In an inconspicuous area, a 1 mm water droplet was applied by brush to the pigment and allowed to sit for 3 seconds, and then the water was blotted away with a blotter. The blotter was inspected to see if any media transferred. If after 3 seconds the media did not transfer, the media was tested again by letting the water droplet sit for 15 seconds and then again if nothing transferred, for 30 seconds, and so on. Results: The hand coloring is extremely water sensitive. After 3 seconds, the pigment readily transfers to blotter. The turquoise colored pigment transfers after 45 seconds. The paper is soft sized and accepts moisture after approximately 30 seconds. Test two: The paper was tested for dry cleaning with an Absorbene smoke sponge and a vinyl eraser to test whether the accumulation of dirt was engrained or lying on the surface of the paper. Results: Small amounts of dirt transferred to the smoke sponge, however the vinyl eraser crumb was much more successful at reducing the dirt. The black printed ink did not appear to lift onto the erasers.

**TREATMENT:**

**Proposal**

Preliminary work completed: Photographed as received. Examined and tested media to determine optimum treatment. Prepared report.

1. Disbind the textblock and document the original sewing structure. Encapsulate and preserve the original sewing thread and supports.
2. Dry surface clean the pages carefully, avoiding the hand colored illumination.
3. Consolidate the flaking pigment on the title page.
4. Repair the textblock leaves and guard the folds.
5. Sew the binding on new cord supports, reproducing the original sewing structure as much as possible.
6. Consolidate areas of red rotted leather.
7. Reattach the boards to the textblock.
8. Consolidate the board corners and fill loses in the leather along the board edges.
9. Reback the binding in leather.
10. Construct a clamshell box with an integral cradle to house the binding.

**Housing Need**

Custom

**Factors Influencing Treatment**

The binding may be rebacked with a natural hollow, rather than tight to the textblock as was done historically, in order improve the opening of the binding.

**Performed Treatment**

Before and after treatment photography was conducted using a DSLR camera. During treatment images were taken as working shots with an iPhone 5.

1. Before disbinding, the textblock was further examined to document the order of the leaves. The leaves were collated with the following formula: 4°: π1 A4-F4, G2. Additionally, the order of the page openings were photographed with an iPhone camera for reference during treatment. A similar digitized copy from the National Library of Israel was also noted to posses as similar order of pages.

During documentation of the textblock, it was noted that the majority of the textblock was sewn with two threads throughout, however, the marbled endsheets were sewn to the textblock with a single strand of thread. This possibly indicates the endsheets were attached after the textblock was initially sewn.
Additionally, as the textblock was disbound, it become clear that the textblock was sewn with endbands that are now lost. This is evidenced by sets of sewing holes near the kettle stitch at the head and tail, and fragments of a white thread found inside a few gatherings leading towards the edge of the binding that is thinner and of a different shade of color than the rest of the textblock sewing. Other loose sewing fragments found in the top and bottom edges appeared to be shaped to fit over an endband core. These were retained and placed in a polyethylene bag.

It was also noticed that there were two sets of sewing holes at each sewing support – rather than sewing around a sewing support and returning to the original hole, a new hole was punched a few millimeters to the other side of the sewing support. This may indicate the sewing holes were not originally pre-punched before sewing but were punched as the book was being bound.

2. Next, the textblock was disbound to gain better access for paper repairs and to replace the broken and fragile sewing. Because the thread was broken and knotted at the kettle stations, attempts to remove the sewing without cutting the thread proved unsuccessful. To preserve the original sewing structure as much as possible, the sewing was cut inside the gatherings, un-looped around the laced-in supports, and left attached to the two supports that were not laced through the boards. The sewing and two removed supports were encapsulated in polyester film in the orientation they were removed from the textblock and retained.

Two supports that were originally trimmed at the shoulder of the textblock spine and were un-attached to the boards, as well as the extant sewing thread attached to the supports were kept in their original orientation as much as possible while removed. They were retained and encapsulated together in polyester sleeve with spot welds to accommodate for the thickness of the supports. The polyester sleeve was labeled to note the head and tail of the binding, as well as note fragments from a possible endband along the top edge. The same strands of thread that contain the endband fragment also contain a large knot at the bottom edge. This knot may be evidence where the textblock was knotted with a separate campaign of sewing to attach the lower endsheets, because this speculation was not clear, it was left unlabeled. Other broken thread fragments that were not attached to the supports (primarily from the lower endleaves) were placed in a small polyethylene plastic bag and also retained.

The disbound textblock was stored in folded groups of folios throughout treatment to prevent loss of the original curve of the spine. Throughout treatment, the endleaves were left attached to the boards as they were originally adhered.

3. Since the haggadah is traditionally read at the dinner table, the recto and verso of the folios were minimally surfaced cleaned with vulcanized rubber Absorbene sponges to preserve the dirt and grime that is evidence of historic use of the binding. Debris was discovered in the gutters of the leaves that resemble crumbs of food. The debris was collected during surface cleaning with a brush and was retained in a 2 1/2 inch x 3 inch polyethylene plastic bag.

4. Tests to consolidate flaking pigment were carried out using a 3-5% solution of isinglass in filtered water. The isinglass was brush applied to an area with flaking green pigment in the upper right hand area and along the middle right edge. The isinglass was wicked in-between cleavage and under the pigment with a brush and dried quickly using a suction disk in hopes of preventing possible corrosion damage to the paper from the likely copper containing pigment. Attempts to consolidate with a dilute solution were not successful. Improvements in the pigments cohesion to the paper was noticed with a 5% solution or higher which resulted in leaving a sheen and coating on top of the pigment. Due to time constraints and lack of expertise in pigment consolidation, the title page was left un-consolidated at this time.

5. Tears and losses throughout the textblock were carried out while the textblock was disbound. In many gatherings with folds containing tears, the torn paper was folded, rolled and creased. Therefore, before the paper was repaired, the creases and tears were locally humidified and flattened, and torn fragments were re-aligned. Repairs in the folds of the gatherings consisted of Tengujo and Usu Mino kozo tissue and Zen Shofu...
wheat starch paste. The tissues were pre-toned before mending with Golden Acrylics to better match the tone of the textblock paper. The edges of the leaves were repaired and strengthened with Tengujo kozo tissue and wheat starch paste. A 1 inch wide loss at the bottom of a folio was filled with a Golden Acrylic toned handmade laid paper of similar thickness to the textblock. It was adhered in place with wheat starch paste and further toned with Rembrandt pastels to better match the tone of dirt accumulation along the edge of the original paper. The endleaves and pastedowns remained attached to the covers during paper repair. Tears and losses were also repaired using wheat starch paste, Usu mino and Tengujo kozo tissue.

The title page previous repair was not removed due to concerns with disturbing the friable media, however, the edge of the title page with the repair contained the missing areas of the paper hinge that were folded and pasted beneath the prior repair. The prior repair was lifted only along the edge of the repair to repair tears and re-construct the hinge kozo tissue and wheat starch paste.

6. The delaminating and soft corners of the board edges were strengthened and consolidated with wheat starch paste. All four corners on both cover boards were consolidated.

7. Losses in the leather corners and edges were filled with a goat skin that was dyed with Selladerm dyes and fixed overall with a spray application of Tinofix. The leather was pared overall with a Shar-fix and paring knives to custom fit the areas of loss. The original leather was easily lifted along the edges of the board. The edges of the original leather were consolidated with 3% Klucel G. The dyed leather was conditioned with wheat starch paste and adhered beneath the edges of the original leather.

7. Two new cords were created to replace the two encapsulated cords that were removed and retained with the sewing. The new cords were twisted with an S-twist to a similar weight to the original cords and stiffened with wheat starch paste.

8. The three extant original cords laced into the boards were stabilized prior to re-sewing the textblock. Frayed cords were wrapped in kozo tissue and strands of new cord fibers were wrapped around the cords on top of the kozo tissue and adhered to the board edge with wheat starch paste.

9. The repaired textblock was re-sewn to the covers with two new loose cord supports and the original three laced-in supports. An 18/3 linen thread was toned with Golden Acrylics to better blend into the dark-toned textblock. Un-toned thread was found to be highly distracting from the text since the original structure of using two strands of thread was reproduced. The endsheets were sewn onto the textblock with one strand of thread, as was done originally. Holes were pre-punched reproducing the historic pattern with two holes at each sewing support. An Usu mino free guard was placed around the seventh gathering that originally contained one folio and one outer guard.

10. The spine of the textblock was lined with Usu Mino kozo tissue and wheat starch paste. The original transverse cloth lining strips were repaired with kozo tissue and wheat starch paste and re-adhered to the spine. Panels with lost cloth lining strips were lined with a new linen cloth of similar thickness to the originals. It was adhered to the spine and onto the board edge beneath the paste down.

11. To add strength to the textblock and because there was evidence of lost original endbands, new primary endbands were sewn at the head and tail of the textblock. 18/3 linen thread was sewn around cores constructed of alum tawed goat skin laminated to vellum with Jade 403 PVA.

12. Final transverse spine linings of Usu mino kozo tissue where adhered to the spine with wheat starch paste to protect the endbands and cords and to strengthen the board attachment to the textblock.

13. The original spine leather was lifted easily along the spine edge with a Caselli spatula and the spine was rebacked with the same goat skin that was prepared for filling the losses in the board edges (see step 7). The
leather were adhered with wheat starch paste and tied up in a finishing press. Once dry, the original leather was adhered down on top of the rebacked leather with Zen Shofu wheat starch paste. The red edges of the deteriorated leather along the spine and corners were lightly toned with Schmincke watercolors and further protected with an SC6000 wax emulsion.

**Housing Provided**

**Cloth clamshell**

**Housing Narrative**

A cloth covered clamshell with an integrated cradle was constructed to house the binding and binding fragments. The enclosure was constructed out of Davy board, Canapetta cloth, and Jade 403 PVA.

Binding fragments retained during treatment were stored in 2 1/2 inch x 3 inch polyethylene bags. The small polyethylene bags were labeled with a black permanent marker and stored in two archival buffered pockets. The pockets and polyethylene sleeve were mounted to a piece of Rising Museum mat board and stored in an archival envelope. The envelope was stored inside the cloth covered clamshell on top of the integrated cradle.

**Storage Recommendations and Handling notes**

The book can be carefully opened flat, but it is recommended to handle and exhibit the book in a cradle, such as the one provided in the enclosure. It is highly recommended to store the book in a stable environment with low relative humidity that does not greatly fluctuate. This will help prevent corrosion damage to the paper that may occur in the handcolored areas.

**TOTAL Treatment Time**

63 hrs
notcat971_D25N, Envelope for binding fragments

notcat971_D26N, pockets contain bagged fragments such as gutter debris, thread, and spine linings

notcat971_D28N

Treatment Report Cont'd

notcat971_D32N

The preservationlab.org

Treatment Photography by: Jessica Elbert
The Preservation Lab

Treatment Report Cont’d

notcat971_A19T, Transmitted illumination showing fool’s cap watermark

notcat971_A19T, enhanced detail of fool’s cap watermark

notcat971_A20T, endsheet Fleur-de-lys watermark

notcat971_A20T, endsheet countermark

thepreservationlab.org

Treatment Photography By: Jessica Ebert & Ashleigh Schieszer
Endsheet flange attached to board

Detail of top edge, Before Treatment

Detail of bottom edge, Before Treatment, nearly every section has pulled through gathering

Evidence that two strands were sewn simultaneously - two threads are discovered stitched through one thread.
Torn fold is creased and rolled,
During Treatment

Paper is locally humidified
and flattened

Tears are repaired with
kozo tissue

During Treatment, local flatting of
creased paper, fragment discovered
under prior repair

During Treatment, fragments are
being unfolded
During Treatment, loss in paper filled

S-twisted cord during construction

example of undamaged original sewing holes

Sewing textblock into covers, During Treatment

notcat971_D10N, After Treatment

Repaired laced-in cord

original sewing stations punched through repairs, During Treatment

Sewing textblock into covers, During Treatment
After sewing textblock onto supports, During Treatment

Lined textblock spine, During Treatment

Filling corner leather loss, During Treatment

Filling corner leather loss, During Treatment

Preparing to reback in leather, During Treatment

After rebacking, book is tied-up in finishing press while drying

Sewn endband, During Treatment

Filling corner leather loss, During Treatment

Preparing to reback in leather, During Treatment

notcat971_D04N, After Treatment