Handling of East Asian Scrolls

Pictorial art and calligraphy mounted as scrolls demand careful handling and viewing practices. The mounted scroll is a complex laminate structure engineered to support and protect the artwork. With their unique components of silk and paper, metal and wood, scrolls are meant to be unrolled, viewed for short periods of time, rolled, then wrapped and stored in a protective box.

Scrolls are subject to damage from improper handling, inadequate storage, and exposure to harmful environmental conditions. Preventive measures, in the form of condition assessments and recommendations for handling, exhibition and storage, will protect scrolls from further damage.

The following are guidelines for collections of East Asian Scrolls. If a scroll appears to be damaged, it is best to seek the assistance of a conservator. When examining any object, it is important to prepare a clean, flat surface free of sharp implements, liquids, or pens. Clean, smooth weights are needed to support the scroll while unrolling. Hands must be clean and free of jewelry. Dirt and perspiration can stain paper, silk, lacquer, and metal. Because of the complexities of the scroll format, it is recommended that two people be present to handle a hanging scroll or handscroll.
Assessing the Stability of a Hanging Scroll

A hanging scroll is a painting, calligraphy, print, or rubbing lined with layers of paper and silk. The top hanging bar and lower roller bar are made of wood. The ends of the roller bar may have a silk covering or roller ends of metal, carved or lacquered wood, ivory, bone, or other precious materials. The hanging cord, with tying cord attached, is fastened at the top of the hanging bar with decorative metal hardware. The scroll is meant to hang on the wall for a limited time. Before hanging the scroll on the wall, it is best to examine it unrolled on a clean, flat surface.

The hanging cord must be stable enough to support the weight of the scroll on the wall hook. Wide scrolls should have two or more sections of cord attached to the wood hanging bar for the appropriate number of wall hooks to support the weight. The wood hanging bar at the top of the scroll must have a stable attachment to the mounting.

The metal hardware securing the hanging cord to the bar must not be loose. If there are tears or delaminations of the paper or silk, or flaking media, the scroll must not be hung on the wall.
Assessing the Stability of a Handscroll (cont.)

The handscroll, which is also a laminate structure made of painting and calligraphy mounted to paper and/or silk, is unrolled to a comfortable arm span and viewed horizontally on a clean, flat surface. The mounting is attached to a wood roller bar to the left and a protective flap made of silk and paper to the right which contains the frontispiece. A tying cord, sometimes with a clasp attached, is affixed to the flap.

Handscrolls, which are sometimes several feet long, are viewed one section at a time. While viewing each section, extra support with clean smooth weights is needed if the mounting or artwork shows sharp creases and lifting or flaking media.

Fragile Scrolls

Fragile and damaged scrolls may be unrolled if careful measures are taken to prevent further damage. Have extra smooth, clean weights ready to support the scroll open, and placed at either end of the table to prevent the scroll from rolling off. Ask the assistance of a conservator if the scroll is damaged.

Scrolls are vulnerable to damage in the form of creases on the art and mounting [Figure 5]. Squeezing the scroll and tying the cord tightly will also cause a crease to form. Over time, creases may become more pronounced, at risk of splitting and media loss [Figure 6]. Place a weight at both ends of the crease for support while unrolling.
Fragile Scrolls (cont.)

Figure 7

- Place weights at the top and bottom edge of the mounting. If there are sharp creases, place weights at each end of the crease. Avoid touching or placing weights directly on the artwork surface. If needed, smooth, clean weights can support a break or delamination in the artwork. While unrolling and rolling the scroll, use even tension to prevent further damage.

- To re-roll the scroll, place each hand on a roller bar end. Keep the mounting aligned and maintain even tension. In case of misalignment or telescoping of the scroll, do not force the edges to align with your fingers, as damage to the artwork and mounting may occur. Unroll to correct then continue.

Figure 8
Displaying a Hanging Scroll
Remove the hanging scroll from its storage box and place on a clean flat surface. Gently pull on the end of the tying cord and unwind. Place the tying cord to the left or right side, behind the scroll. This ensures correct placement of the hanging pole hook. If a protective paper is rolled with the scroll woven under the cord [Figure 11], remove it and set it aside.

Gently hold the scroll with the left hand, insert the hanging pole hook under the middle of the hanging cord, and lift the scroll to the hook on the wall. The latter must be high enough on the wall to accommodate the full length of the scroll. For longer scrolls, additional hooks attached to the wall may be necessary, as well as a stool to stand on. It is best to have more than one person to hang a scroll. Place the left hand at the middle of the bottom roller bar to support the scroll, and allow for even unrolling. Unroll to the top of the image.

If silk hanging strips (futai) [Figure 11] are attached to the top hanging bar, unfold them to their hanging position. Unhook the hanging pole and place it aside.
Rolling a Hanging Scroll

Placing a hand on each of the bottom roller bar ends, and with even tension, slowly roll towards the top hanging bar [Figure 13]. Keep the scroll edges aligned.

If the scroll is misaligned, do not force the edges to align, as damage to the paper and silk will occur. Unroll to the point where the edges are not aligned, and roll again [Figure 14]. Roll to the top of the image or bottom of the futai and hook the hanging pole to the hanging cord, lifting the scroll from the wall hook. If the scroll is small, and the hanging hook is easily accessible, a hanging pole may not be needed. Place the scroll on a clean, flat surface, support with weights, and unhook the hanging pole.

If applicable, fold the futai against the hanging bar using the original folds as your guide and complete the rolling. Weave the protective paper strip under the center of the hanging cord, then under the folded futai, and wrap it around the scroll.
Tying a Hanging Scroll
Place the hanging scroll gently in your left hand. Avoid squeezing the scroll tightly. Wrap the tying cord around the scroll three or four times, gently and with even tension. Form a loop with your finger, then cross it over and under the cord as shown in the illustrations below [Figures 16-21].

Figure 16

Figure 17

Figure 18
Tying a Hanging Scroll (cont.)

Figure 19

Figure 20

Figure 21
**Viewing a Handscroll**

Handscrolls are meant to be viewed one section at a time as a narrative, and may be several feet long. Prepare a clean, flat surface, and have smooth weights ready before opening the scroll. Place weights at the right and left edges of the viewing surface to prevent the scroll from rolling off the table. If the tying cord has a clasp at the end, protect the scroll from damage by wrapping the clasp in soft paper or cloth.

![Handscroll](image)

*Figure 22*

Begin unrolling the handscroll to the left, to a comfortable arm span, keeping even tension, and place weights on the right and left to permit prolonged viewing of the narrative. As you continue unrolling to the left, and, rolling up from the right, remove and replace the weights. Maintain even tension and a loose roll on the right equal to the diameter of the handscroll fully rolled [*Figure 22*]. Do not squeeze tightly, as creases will form.

After viewing the entire scroll, the rolling direction is reversed, keeping the scroll edges aligned. If misalignment of the scroll occurs, do not force the edges to align. Unroll to correct the alignment and roll again. Unwrap the clasp and cord and tie the handscroll.
Tying a Handscroll
The tying cord of a handscroll may have a clasp, made of jade or bone, attached at the end. While gently holding the handscroll in the palm of your left hand, wrap the tying cord around the handscroll three or four times and secure the clasp under the cord. If the tying cord is without a clasp, wrap the cord around the handscroll twice; on the third wrap, place your finger under the cord [Figure 23]. Form a loop at the end of the tying cord, pass it under the space provided by your finger, slide your finger out, and pull gently on the end of the loop [Figure 25]. Never squeeze the handscroll, or pull the loop too tight, as damaging creases will form. Wrap the handscroll in soft, acid-free tissue or unbleached cotton cloth and place it in its box.
Storage of Scrolls

Scrolls are wrapped in cloth and stored in cloth bags or boxes made of Paulownia wood. If the box is damaged and no longer provides a protective fit for the scroll, a new box of archival corrugated board can be constructed. Never discard the original wrapping and box, as they are part of the object and may contain information about the scroll.

The interior of the box may provide support for a scroll with roller ends [Figure 28]. The wider side of the U-shaped wood pillow provides the space for the top hanging bar. Scrolls without roller bar ends rest on the bottom of the box.
Custom Single Scroll Box

Scroll boxes can be constructed of archival corrugated board as a one-piece structure with linen ties. The bottom of the box is lined with a piece of high-density polyethylene foam or layers of archival board to provide extra stability. The box in Figure 31 was made for a large scroll with extensive damage. The condition was assessed by conservators, an image was made of the scroll while open, and any inscriptions noted. All information is included in the box to eliminate the need for unnecessary handling of this fragile scroll.

The scroll was wrapped in unbuffered acid-free tissue. A Mylar sling with linen ties woven through eliminates unnecessary handling. A label on the box asks curators to seek the assistance of a conservator before handling the scroll.
Custom Housing for Group Storage

High-density polyethylene foam planks are notched and joined to provide storage in acid/lignin-free boxes. Supports for the roller ends are cut to provide suspension of the scroll as in the traditional wooden scroll box. Archival board (see Appendix A), with cotton ties attached at the sides, lines the bottom of the box.

Scrolls are wrapped in unbleached cotton cloth or acid-free unbuffered tissue paper. Identification labels are visible. To accommodate different scroll widths, the roller bar end supports are adjusted with foam spacers to secure the scroll in its track. Archival board rests on top and ties to the bottom board, securing the contents.

Damaged scrolls missing roller ends, or scrolls with flat ends covered in silk, are stored in group boxes using the same foam plank structure with an added drape of unbleached/unsized cotton cloth. The cloth, affixed to the foam tracks with stainless steel specimen pins, creates a sling to cradle the scroll.

Scroll hardware and loose fragments are wrapped and stored with the scroll. Paper tags provide identification.
### Appendix A: List of Materials

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>DESCRIPTION</th>
<th>VENDOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrapping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unbleached cotton</td>
<td>Yardage may be cut to wrap individual scrolls</td>
<td>Testfabrics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P.O. Box 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>415 Delaware Ave.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>West Pittston, PA 18643</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tel. (570) 603-0432</td>
</tr>
<tr>
<td>Acid-free unbuffered tissue paper</td>
<td>30” x 40” sheets cut to fit individual scrolls</td>
<td>University Products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>517 Main St. P.O. Box 101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Holyoke, MA 01041-0101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tel. (800) 628-1912</td>
</tr>
<tr>
<td>Boxes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acid/lignin-free 60pt board, buffered with 3% calcium carbonate (pH 8.5). Corners have metal edges.</td>
<td>Hollinger Metal Edge, Inc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18&quot;x40” textile storage boxes for large scrolls</td>
<td>Archival Storage Materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6340 Bandini Blvd.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commerce, CA 90040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tel. (800) 862-2228</td>
</tr>
<tr>
<td>Acid/lignin-free 60pt board, buffered with 3% calcium carbonate (pH 8.5). Corners have metal edges.</td>
<td>Hollinger Metal Edge, Inc.</td>
<td></td>
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<td></td>
<td>23”x31” newspaper storage boxes</td>
<td></td>
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<tr>
<td>Board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffered blue-gray/white barrier board (pH 8.5)</td>
<td>Placed at bottom of box, white lignin-free side facing up</td>
<td>University Products</td>
</tr>
<tr>
<td>Acid/lignin-free buffered Perma-Dur archival corrugated board. Single wall. (pH 8.5)</td>
<td>Placed on top of box contents</td>
<td>University Products</td>
</tr>
<tr>
<td>Tying Tape</td>
<td>Ties are attached to the long side of the base board and inside cover board</td>
<td>Testfabrics</td>
</tr>
<tr>
<td>Foam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-density polyethylene foam</td>
<td>Dow 220, 2lb density. 1&quot; and ½&quot; thick planks, custom cut</td>
<td>Rogers Foam Corporation</td>
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<tr>
<td></td>
<td></td>
<td>20 Vernon Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Somerville, MA 02145</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tel. (671) 623-3010</td>
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**Appendix B: Sample Survey Form**

<table>
<thead>
<tr>
<th>Lab log no.</th>
<th>Collection no.</th>
<th>Accession No.</th>
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<tr>
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<table>
<thead>
<tr>
<th>Scroll overall measurement</th>
<th>cm (H) x cm (W)</th>
<th>Bar Length: cm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Image (horsh) measurement</th>
<th>cm (H) x cm (W)</th>
<th>Type of Scroll</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>hanging</td>
</tr>
</tbody>
</table>

### IMAGE/Painting

- **Image (horsh) substrate:**
  - silk
  - paper
  - canvas

- **Image (horsh) subject:**
  - text
  - figure (general)
  - figure (religious)

- **Image substrate condition:**
  - stained/discolored
  - hard creases
  - loss

- **Image (horsh) treatment priority:**
  - four (unstable, major treatment)
  - two (stable, minor treatment)

- **Image condition comments:**
  

### MOUNTING

- **Mounting material:**
  - silk
  - paper
  - silk and paper combo

- **Mounting Style:**
  - Chinese
  - unknown

- **Mounting condition:**
  - stained/discolored
  - tears

- **Futai:**
  - present
  - hanging

- **Futai condition:**
  - surface grime
  - tears

- **Top bar (Hyomoku):**
  - unstable attachment to scroll body

- **Top bar condition:**
  - absent

- **Metal fittings:**
  - metal
  - wood

- **Jiku:**
  - present

- **Jiku condition:**
  - sound

- **Uwamagigini (material at top-back):**
  - present

- **Paper backing condition:**
  - stained/uncolored

- **Labels:**
  - gummed

- **Mounting treatment priority:**
  - four (unstable, major treatment)

- **Mounting condition comments:**
  

### Recommended treatment

- **Surface clean:**
- **Support creases:**
- **Re-attach delamination:**
- **Secure Jiku:**

### Treatment Comments:

- **Conservator/technician:**
  - Asian art specialist
  - Paper conservator
  - Trained technician