

University of Iowa Libraries Conservation Treatment Report

Call Number	FOLIO QM21 .R45 1661 UI Hardin Library for the Health Sciences Rare Book (Oversize)	Publication Date	1661
Title	[Catoptrum microcosmicum. German] Kleiner welt spiegel, das ist, abbildung göttlicher schöpfung an dess menschen leib : mit beygesetzter schriftlicher Erklärung : so wo zu Gottes Weissheit : als dess menschen selbst erkandtnuss dienend / auss Johannis Rimmelini, philosophiae et medicinae Doctoris, Lateinischem exemplar, in die Teutsche sprache übersetzt ; durch M. Johannem Ludovicum Rimmelinum, med. stud ; authoris filium.	Publisher	Ulm: Gedruckt durch Johann Schultes Buchtrucker / In Verlegung Johann Görlin Buchhandlers in Ulm
Author	Johann Rimmelini	Conservator	Katarina Stiller
Engraver	Lucas Kilian		
Printer	Johann Schultes		
Date Examined	11/20/23	Contact	
Date Returned	8/8/24	Language	German, with Greek and Latin references
Selection Method		Barcode	31858064340569
Format	printed book	Photography	
Housing	mylar dust jacket; folder	Ownership mark	

Language In German, with Greek and Latin references

Context *Catoptrum microcosmicum* (“microcosmic mirror”) was the most extensive anatomy book with overlapping flaps of its time. It refers to the classical notion of the human body being a microcosm or representation of the universe in miniature. Having a series of overlapping flaps helped convey the dimensionality of the body, with some areas containing 15 layers. It was originally published in Latin in 1613 without Rimmelini’s approval and later published in 1619 with Rimmelini’s approval along with accompanying text. It was intended more for the curious layperson rather than for teaching due to its delicate construction, great expense, and unwieldy size. It was reprinted numerous times in the 17th and 18th centuries in Dutch, French, English, Latin, and German.

Rimmelini was a town physician in Ulm and later a plague doctor in Augsburg. The engravings were based on Rimmelini’s own drawings and rendered into engravings by Lucas Kilian. The works were printed on eight separate plates then cut and combined to make three.

This particular copy is notable for its blue boards binding, which is likely original. The University of Iowa’s Hardin Library also has a first edition copy with a parchment binding recycled from what was likely a 15th century incunabulum.

Sources

"Johann Rimmelini." John Martin Rare Book Room, Hardin Library, University of Iowa.

<http://sdr.lib.uiowa.edu/exhibits/imaging/remmelin/about.htm>

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Schmidt, Suzanne Karr. "Printed Bodies and the Materiality of Early Modern Prints." *Art in Print*, Vol.1, No.1 (May-June 2011), pp.25-32.

Media

- Engravings – title page and pages 7, 13, and 19.
- Text is relief printing.

Support (46.5 x 37 x 5) cm

- Textblock is composed of handmade, laid paper.
- 3 sections, with each section made up of 2 bifolia.
- All-along sewing on raised cords, 5 sewing stations, 2 kettles.
- Pg. 7, plate with 8 flap zones.
 - Eye, 6 flaps
 - Clouds, 4 flaps
 - Ear, 3 flaps
 - Man, 7 flaps; globe flap to hold foot in place and vanity flap over body
 - Some openings are restrained in their opening, possibly from previous mends.
 - 3rd flap has smaller flaps on it.
 - Tongue, 1 flap
 - Heart, 2 flaps
 - Woman, 4 flaps; flap to hold foot in place and vanity flap over body
 - 3rd flap has 2 smaller flaps on it.
 - 1st and 2nd flaps are partially cut over buttocks to create smaller flaps.
 - Possible 5th flap of skeleton or may be intentionally adhered.
 - Woman Torso, 4 flaps; 2 vanity flaps
- Page 13, plate of man
 - Liver, 1 flap
 - Kidney, 1 flap
 - Man, 7 main flaps, 4 unattached (intentional) components within
 - Skull, 3 flaps
 - 2nd flap has 2 small flaps
 - 3rd flap has 3 small flaps
- Page 19, plate of woman
 - Woman, 6 flaps, 2 unattached (intentional) components within; 2 vanity flaps
 - Skull, 3 flaps
 - Stomach, 2 flaps

Binding (46.8 x 34 x 12) cm

- Boards made of laminated layers of paper, covered overall with blue paper.
- Pastedown composed of 2 layers of handmade, laid paper; cross grain; single flyleaf; pastedowns and flyleaves are somewhat smaller than the textblock and pale blue; untrimmed.

Presence of Foreign Substances

- Surface dirt overall.

Structural Change

Support

- Paper is very soft and delicate, especially at tail fore edge corners (likely from use).
- Surface dirt, stains, tidelines, small tears throughout the textblock.
- There is some paper skinning on the title page engraving, resulting in the mouth area of the skull to be detached and adhered to the opposite leaf.
- Page 6 fold-out has a large tear.

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- Old mends throughout, some of which are causing tenting and distortion of leaves; yellowed adhesive traces near gutter of page 4.
- Large horizontal creases across center of leaves, obscuring the text somewhat; these are likely from the initial beating process or were possibly exacerbated by old mends.
- Some weakening, creasing, small tears on flaps overall.
- Pg. 7, plate
 - Man
 - Some openings are restricted, possibly from previous mends.
 - Arm and leg have creases, causing layers to not line up well.
 - Based on comparisons to copies of the same edition, an outer floral flap is missing.
- Page 13, plate
 - Kidney, 1 flap
 - Creasing severely restricts opening.
- Page 19, plate
 - Woman
 - Vanity flaps are very worn and stained.
 - Flap around genitalia torn.
 - Smaller flaps around breasts worn and opening is restricted.
 - Based on comparisons to copies of the same edition, an outer flap depicting smoke is missing.

Binding

- Overall abrasions, small tears, and creases to cover, resulting in loss to blue layer.
- Board corners delaminating.
- SS3 and SS5 cords not attached to front board.
- SS4 cord broken but re sewn to front board.
- Previously rebacked with blue paper.
- Mends to spine with Kozo paper.
- Paper covering over spine is loose, with numerous tears and areas of loss.
- Small gouges on back board.

Treatment Proposal

1. Surface clean with cosmetic sponges.
2. Repair tears and reinforce creases with Kozo paper and wheat starch paste (wsp).
3. Remove old repairs in gutter region of pg. 7 and repair with Kozo paper and wsp to reduce tenting.
4. Loosen old repairs in gutter region of pg. 12-13 to reduce tenting.
5. Reduce adhesive staining with gels.
6. Reduce adhesive on lifted spine covering with methylcellulose poultice.
7. Line interior of lifted spine covering with Kozo paper with flange extension.
8. Adhere flange to inside of front board.
9. Consolidate delaminating board corners with wsp.

Treatment

Objective: A major value of this book is that it is still in its original binding, so it was important for treatment to be minimally interventive. Retaining its signs of use, such as historic repairs, was important to preserve evidence of the book's function as a hands-on teaching object. However, this book is also very popular with classes, scholars, and events, so an additional goal of this treatment was to stabilize for reading room use and to go on display for an upcoming exhibit in 2025.

1. Before treatment photography. (1.5 h)
2. Surface cleaned with cosmetic sponges. (2 h)
3. Reduced overall adhesive and water staining with gels (5%). (40 h)
 - a. Since the textblock paper tidelines very easily due to its lack of sizing and overall softness, semi-rigid gels were determined to be the best method to aqueous clean in a highly controlled manner. The gels were able to

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draw out discoloration without introducing much moisture. Additionally, it is a less interventive approach than immersion washing and allowed for in-situ cleaning without disturbing the binding.

- b. The gels were cut to fit specific stains and left on for 10-45 min before being replaced.
4. Repaired tears and reinforced creases with 9 gsm Usu-Gami paper and wheat starch paste. (8 h)
5. Reinforced more worn flaps on the verso with 9 gsm Usu-Gami paper and wheat starch paste. (8 h)
6. Mechanically removed 3 old repairs with DI water in gutter region of pg. 7 and repaired with 9 gsm Usu-Gami paper and wsp to reduce tenting. (7 h)
7. Loosened old repair in gutter region of pg. 12-13 to reduce tenting. (45 min)
8. Reduced adhesive on lifted spine covering with methylcellulose. (30 min)
9. Lined spine with 12gsm Usu-Gami paper. (30 min)
10. Created baggy back. (1.5 h)
 - a. Adhered interior edges of lifted spine covering from back board with medium weight Seikishu paper.
 - b. Adhered ramieband at head and tail for additional support and shaping of endcaps.
 - c. Adhered other end of paper to lifted front board (no adhesive on spine).
 - i. Avoided adhering spine overall in order to limit spine stiffening and to enable easier future potential access to the spine.
11. Inpainted visible Seikishu paper along spine with acrylics and painted a topcoat of methylcellulose. (4 h)
12. Adhered loose/lifting paper covering along spine with wsp. (15 min)
13. Consolidated delaminating board corners with wsp. (10 min)
14. Reduced additional selective staining on verso of title page and first page with gels (2.5%). (8 h)
 - a. The gels were briefly dabbed onto stains, resulting in greater control over the application. A lower gel concentration was used, resulting in a more flexible, moisture-holding gel that would better conform to the undulations of the paper.
15. After treatment photography. (2 h)

Materials

- Wheat starch paste (Zen Shofu)
- Methylcellulose (2.5%)
- Usu-Gami paper (9, 12 gsm)
- Gellan gel (2.5, 5-6%) in DI water
- Seikishu medium-heavy weight
- Ramieband
- Golden Acrylics

Housing

Cloth covered clamshell; Mylar inserts

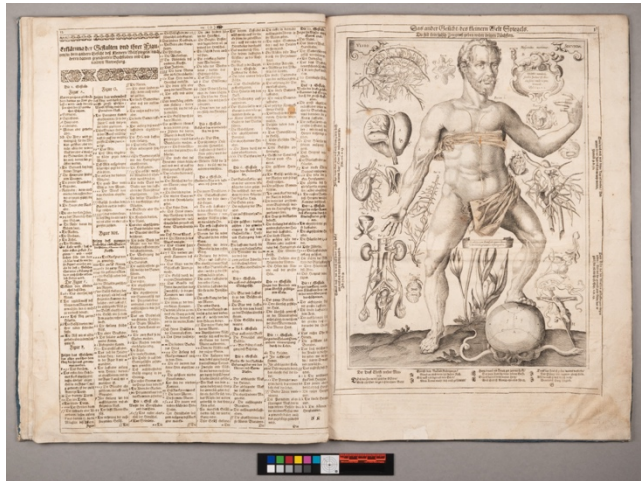
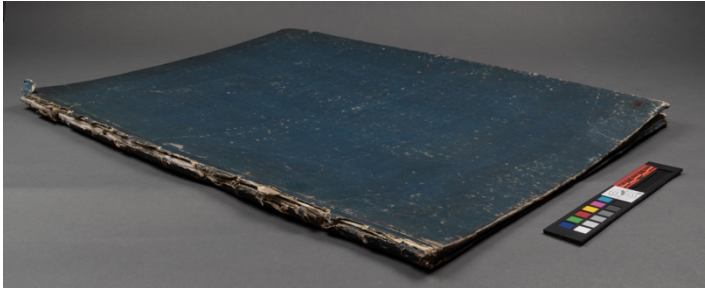
- Having Mylar sheets over the plates with flaps would help keep the flaps from moving out of position as the pages are turned while still allowing the page contents to be visible. Much of the previous creasing and misalignment of the flaps seems to have originated from the flaps moving around from overly enthusiastic page turning. The overall large size of the leaves makes it inherently difficult to turn the pages with fully supporting the flaps without this added Mylar support.

Hours

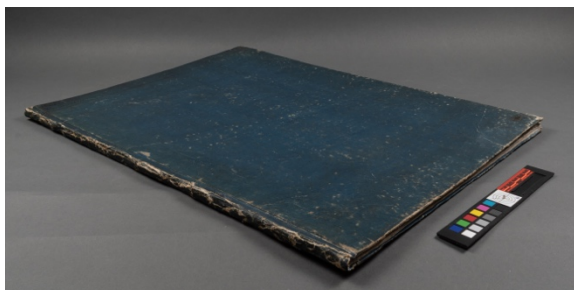
Examination, Documentation, and Treatment	84 h 10 min
Housing or Mounting	2 h
Mylar sheets over pages with plates	
Cloth-covered clamshell	
Total Treatment Hours	86 hours 10 minutes

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Before Treatment:



After Treatment:



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