

Project Reports 2007-08

Conservation Treatment of a Seljuk Qur'an

Condition Report and Treatment Proposal



Inventory Number: no number (from Birgi)
Object: Quran
Date: 1320
Format: bound codex
Dimensions: 28.0 cm (W) x 37.7 cm (H) x 7.8 cm (D)

GENERAL DESCRIPTION:

Binding:

The binding is in the Islamic style, with characteristic envelope and fore-edge flaps. It is of significantly lower quality in decoration and manufacture than the textblock, one reason to think it is not original. Additionally, in abraded areas along the edges, other leathers can be seen below the present outer covering of brownish-black goat leather. This leather was dyed before it was tooled since the force used in the tooling often cut the upper surface of the leather at the edge of the tool impression thus exposing the leather's lighter undyed interior.

Front and back boards display almost identical decorative schemes. Variations in the two designs (such as the absence of motifs along one side of the outer border on the back cover, and the absence of small subsidiary motifs in the upper cornerpieces on the front cover) seem to reflect carelessness on the part of the maker. The field of each board is defined by a doublet of blind-tooled lines, about 1.0 cm from the edge of the board. Within this frame is a border, about 0.7 cm wide, of blind-tooled S motifs. These are made with a single tool bearing the S motif. Then another doublet of blind-tooled lines defines the inside edge of the border. The field is further subdivided by doublets of blind-tooled lines parallel to and about 5.0 cm from each side of the field. Blind-tooled composite patterns used to decorate parts of the field are executed with five individual tools, each bearing a different motif: a small circle, a slightly larger circle, a still larger circle, a square, and an ellipsoid shape with projections at its long ends. The particular assemblage of tooled marks is varied to create different larger patterns. A cross-like

pattern is tooled in each of the squares at the corner of the board field. Another cross-like pattern is placed in the middle of the large central rectangle of the field, with a small cross flanking it on each of its horizontal sides. Cornerpiece patterns appear in each of the corners of this large central rectangle within the field.

The decoration of the envelope flap is closely related to that of the covers. Again there is an outer border of blind-tooled S motifs bounded on each side by doublets of blind-tooled lines. Blind-tooled cornerpieces are positioned in each corner of the field created by this border with a triangular shape stamped at the pointed corner of the envelope flap. The envelope flap's upper and lower edges measure 6.8 cm, and the point of the flap is 10.0 cm from the opposite side.

Despite the thickness of the manuscript, the fore-edge flap is only about 2.6 cm wide, which necessitated making unusually large joints between the fore-edge flap and the envelope flap, and the fore-edge flap and the back cover. The former joint measures 2.3 cm at the tail and 1.5 cm at the head; the latter flap measures 2.5 cm at the tail and 3.0 cm at the head. Blind-tooled lines are used to subdivide the area of the fore-edge flap into eight rectangular spaces. Each of these is decorated with two clusters of blind-tooled motifs arranged in a vertical row running the length of the flap.

The spine is plain, as is generally characteristic of Islamic bindings. A continuous piece of leather was used to cover the front outer board and an extension of this leather was adhered over the adjacent part of the spine. A second continuous piece of leather was also used to cover the back outer board and flaps. When the extension of this piece was adhered over the adjacent part of the spine, the overlap of the extensions from the two boards create the completed spine. The spine leather has additional extensions at the head and tail which form caps for protection of the endbands.

The leather of the outer covers is turned-in about 2.0-4.0 cm and adhered to the inside of the boards. The corners of the turn-ins are not carefully mitered, nor are the edges cut straight. The front, back and envelope flap doublures are covered with light cream-colored, machine-made, wood-pulp paper. This paper covers the front and back boards, crosses the inner spine joints and is adhered to the first/last pages of the textblock. In the front, this paper extends about 8.0 cm onto the textblock; in the back, the paper extends only about 1.0 cm onto the textblock and lies on top of a strip of European paper about 2.5 cm wide. This lower paper is perhaps the remnant of an earlier joint support. In torn areas of the present doublure paper, two other papers are visible, with textile fiber remnants on the surface of the lowest paper. Below the papers lies black leather. The fore-edge flap is covered with a piece of striped cotton (?) cloth, stripes oriented horizontally, which has an ikat pattern made from blue-black, red, dark blue, pink, white and variegated green threads. This cloth is adhered about 3.0 cm on the envelope flap, extends across the joint between the envelope flap and doublure flap, continues across the fore-edge flap and the joint between the fore-edge flap and the back cover, and then extends about 3.0 cm onto the back board. The extensions of this cloth onto the envelope flap and back board lie under the wove paper used to cover these doublures. Another strip of the paper is adhered over the cloth on the fore-edge flap doublure but not on the joints.

The textblock spine is lined with a tightly-woven undyed cotton or linen fabric. Extensions of the spine lining at the sides go about 1.5 cm onto the front/back boards and are adhered there under the paper used to cover the doublures.

From the surviving remnants of the endbands it can be observed that they had leather cores and were woven with red and ivory-colored two-ply silk (?) threads, anchored with the same ivory-colored thread. The unsupported sewing is made at two stations also with the same ivory-colored thread.

ADDENDUM:

During treatment, another wine-red leather binding was found largely intact beneath the present outer covering. This wine-red leather covers the front and back boards and the envelope flap, and there are also remnants of the leather on the fore-edge flap. This leather shows the blind-tooled impressions used to decorate the outer binding, as the force of the tooling penetrated to that lower layer. It also has the impression of a large central medallion at the center of the front and back boards, unrelated to the outer binding. The impression of this medallion seems not to have been caused by a stamp or by changes in the board below the leather; rather it appears to be a change in the color of the leather caused by juxtaposition of the board to some other surface which bore this medallion. The turn-ins of red leather extend onto the inside of the boards.

As the doublures of the present binding were cleaned, several earlier layers were revealed. Under the present doublure paper were two different layers of paper, then a paper which bore remnants of textile fiber in strips along the free board edges, another layer of paper, the turn-ins of wine-red leather from the outer board and finally a layer of brownish-black leather covering the entire surface of the board. Stamped designs are visible in the lowest layer of brownish-black leather: a small central medallion and cornerpieces in each extreme corner of the board. This style of decoration is more in keeping with the decoration usually found on an outer binding cover.

Turn-ins of wine-red leather and two pieces of textile survive on the doublure of the envelope flap. The first textile, a piece of printed cotton (?) 3.5-4 cm wide, lies adjacent to the joint with the fore-edge flap. Its position there suggests that it may have been used to repair or support the joint. In this fabric, white, brown and black are used to create an ikat-like pattern of stripes in which small floral motifs are placed. While the strip lies over the brownish-black leather covering of the envelope flap doublure, its ends lie under the turn-ins of wine-red leather from the outer flap cover. The repair of the joint thus seems to have occurred before the wine-red leather cover was given to the manuscript. A second fragmentary strip of striped cotton (?) fabric about 2 cm wide is adhered to the pointed edge of the envelope flap. This fabric features wide stripes of red alternating with wide composite stripes of alternating dark blue and white. In position and appearance it seems to be a turn-in from the outside of the binding. The observation of textile fiber remnants in strips along the free edges of the other boards supports the hypothesis that this textile once covered the entire outer surface of the binding.

The complicated stratigraphy of the various layers of leather, paper and textile on the inner and outer surfaces of the boards suggests the following scenario: The oldest covering layer is the brownish-black leather, now on the doublure sides of the board, as it lies under all the other layers. Its design, however, suggests that it was the outer covering of an earlier binding. Possibly at some point, the boards with this leather covering on the outside were detached and reattached so that their outer covering was now on the inside. The joint between the envelope flap and fore-edge flap was repaired with the strip of brown fabric. Wine-red leather was then used to cover the outer board surfaces. Later still, the brownish-black leather now on the doublure was covered entirely with a layer of paper while the outer boards were covered with textile. Subsequently, this textile was largely removed, except for remnants of turn-ins on the doublures, and the inside covers received two further layers of paper. Finally, the manuscript was given its present binding—the outside covered with tooled brownish-black leather and the doublures with machine-made paper.

Textblock:

The textblock begins with a blank page, side a of the first leaf. On side b of this leaf, numbered page 1, and side a of the second leaf, page 2, there are full-page facing illuminations. The text then begins on facing pages 3 and 4, which are also fully illuminated. Other full-page illuminations are found on pages 277 and 278, which fall near the middle of the text, and pages 581 and 582, which mark the end of the text proper. These are followed by two fully illuminated pages, both divided into three columns each with fifteen rows on page 583 and fourteen rows on page 584. The rows represent the letters in the Arabic alphabet. Within a row, the cell in the first column gives the name of the letter and the cells in the second and third columns give a count of how many times the letter is used in the text. A colophon comes after these illuminations on page 585. This is written in six lines in a roughly square area measuring 13.2 cm W x 13.5 cm H. It provides the name of the calligrapher, Muhammed bin Muhammed bin Ibrahim bin el Müdrimi (?), and the date of copying, 7 Safer 727 A.H. (19 March 1320). Finally, the textblock ends with a blank flyleaf.

Traces of red ink seem to indicate that the full-page compositions of the illuminations at the front of the manuscript were sketched with this media before the final paints were applied. Red ink was also used to generally define the compositions on pages 277-278 and 581-582. However, in the text panels of the illuminations on these pages, blind-tooled lines were used to lay out the panels and a sketch of the framing design.

In addition to the full-page illuminations, a variety of other illuminations are used in the manuscript. These include marginal indicators and notations as well as verse markers and interlineal marks within the text. The textual marks help provide a correct pronunciation of the words. Marginal illumination identifies the location of verse headings, other types of subdivisions of the text and where ritual prostrations should be made when the text is read. They also give the number of words and letters in each verse.

Trimming of the marginal illuminations may indicate that the manuscript was originally larger and was cut down at some time when it was rebound.

Illuminations were made with opaque watercolors and gold. The paint palette includes dark blue, gold, red and green. Some areas of gold seem to be overlaid with a reddish-brown glaze that gives them a copper-like tone. At least some of the gold was applied in leaf form and these gilded areas were burnished so heavily that they sank into the paper, giving the illuminations a sculpted, three-dimensional effect reminiscent of a kind of Islamic wood work.

Single verse markers were usually though not entirely made with a stamp. (See, for example, page 8 for a verse marker made by hand, and page 9 for a stamped one. A marker stamped twice can be seen on page 409.) Two different stamps were used for the single verse markers, a rosette with 12 petals at the front of the manuscript (e.g. page 9) and a rosette with eight petals after page 20 (e.g. page 540). Placement of each verse marker of the eight-petal type was indicated by a small circle drawn with red. Leaf gold was then applied in this circle, over which the rosette form of the verse marker was stamped in black ink and embellished with blue and/or brownish-red paint. A placement circle of red seems not to have been made for the twelve-petal type verse marker, which was embellished with blue and brownish-red paints. The larger markers counting ten verses were drawn by hand on the first 20 pages and stamped thereafter. Two different stamps were also used for these markers (see page 12 for one drawn by hand, page 20 for the predominant stamp, and page 105 for the second stamp was used only on pages 105-119).

The textblock support is a sized and burnished beige laid paper of the Islamic type. The paper pulp was relatively homogeneous with incompletely beaten thread remnants occasionally visible on the surface. Laid lines are oriented horizontally with about 5-6 laid lines per centimeter on some leaves and 7-8 laid lines per centimeter on others. Chain lines are only partially visible on some leaves, perhaps in groups (e.g. pages 30/31 and 242/243).

A representative page of text bears thirteen lines of script, written with black ink. The overall intensity of the colorant in the ink would seem to indicate that it was derived from a source of carbon black. However, light areas in some calligraphic strokes where the pen was being lifted seem to have a brownish cast, so perhaps the ink is a composite of carbon black and iron gall components. Other marks and indicators in the text are written with red, blue, gold and green ink; some of the gold marks are outlined with black. Verse headings are written on a large scale with gold ink, outlined with black. They are further indicated by a drop-shaped marginal illumination and marginal writing. Marginal notations are written with blue, red and gold outlined with black. The text panels are not framed with lines ruled in paint or ink.

A ruling frame was used to create impressions in the paper for placement of the lines of script. These impressions can be seen on page 12. Two vertical impressions, spaced about 0.8 cm apart, define the fore-edge of the text panel. A single vertical impression

defines the gutter edge of the text panel. The horizontal impressions that seem to establish the base-line for the lines of script are about 2.0 cm apart.

Most of the gatherings are constituted of conjoint bifolios. A few bifolios, such as 142/143-148/149, are made of single leaves attached at the fold-line. The gatherings seem to be assembled primarily in quinions and catchwords are not used in the text.

CONDITION:

Binding:

Front outer cover

The leather of the cover is soiled. Top and bottom edges of are severely abraded and torn, exposing areas of delaminating board and other layers of leather below. Immediately below the present covering is wine-red leather with brownish-black leather below that. Two large scratches are on the upper spine edge of the board. The leather along the joint with the spine is cracked and there is a loss of board on the lower edge near the spine.

Spine

The spine leather is soiled and has numerous small vertical cracks running the length of the spine. The caps are severely abraded and show small losses at their edges, especially at the tail joints. The tail cap is torn at the back joint.

Back outer cover

The leather of the cover is soiled. Top and bottom edges are severely abraded. A tear about 17 cm long on the bottom edge exposes areas of delaminating board. Another area of heavy abrasion exists at the center of the board, with multiple vertical scratches below this area. The leather of the joint between the back cover and fore-edge flap has many cracks and small areas of abrasion, especially at the tail, the extreme head of the joint, about 8.0 cm below the head of the joint and immediately adjacent to the edge of the joint with the back cover.

Fore-edge flap outer cover

The fore-edge flap leather is soiled. A deep blunt impression into the flap, with associated abrasion and damage in the leather surface, is apparent about 2.0 cm below the head edge. The joint between the fore-edge flap and envelope flap shows some cracking near the tail of the joint. A horizontal tear crosses the leather of the joint about 3.2 cm from the tail.

Envelope flap outer cover

The leather of the envelope flap is soiled and the upper edge abraded.

Front doublure

The doublure is bumpy and uneven because of deformations in the board or accretions on the board's inner surface under the doublure. The lower fore-edge corner of the wood pulp paper adhered over the doublure is missing. This paper is quite brittle and browned and, perhaps partially as a result, there are numerous tears on the paper's edges, some quite long, as well as small losses. The extension of the paper over the inner joint onto the textblock is entirely split at the joint.

Spine

The spine has been pulled away from approximately the first two-thirds of the textblock. The spine has also been pulled away from approximately the last eighth of the textblock. The anchoring threads of the endbands and the sewing in these parts of the textblock have broken or been pulled through the support.

Back doublure

This doublure is also bumpy and uneven because of deformations in the board or accretions on the board's inner surface under the doublure. The wood pulp paper adhered over the doublure is brittle and browned, especially at the top, bottom and spine edges. The paper is torn along the upper edge adjacent to the fore-edge flap joint and has been repaired at the upper corner adjacent to the fore-edge flap and on the bottom edge. The extension of the paper over the inner joint onto the textblock is entirely split at the joint. The cloth over the joint between the back doublure and the fore-edge flap doublure has scattered horizontal slits with threads lifting from its raw edges at the top and bottom of the joint.

Fore-edge flap doublure

The paper over the fore-edge flap doublure has small losses at the center of the flap as well as on the top and bottom edges. A horizontal tear at the center of the flap reveals dark brown leather underneath the layers of paper and cloth covering the flap. Threads are lifting at the raw edges of the cloth on the top and bottom edges of the joint between the fore-edge flap and envelope flap.

Envelope flap doublure

The doublure is bumpy and uneven: a large horizontal ridge at the center of the flap seems to be caused by a deformation of the board and other unevenness may be due to accretions on the board surface. The paper covering the doublure is browned and brittle. It is abraded along the ridge near the center of the flap towards the joint with the fore-edge flap. The areas of the doublure paper adhered over the turn-ins from the outer cover of the flap are soiled and this soiling is pronounced on the lower edge of the flap and the lower half of the pointed edge of the flap. When the doublure paper is lifted slightly, another layer of paper is visible below it.

Endband

As described above, only remnants of the former endbands survive.

Sewing

The sewing is largely broken, excepting only the part of the textblock where the spine leather was not pulled away.

ADDENDUM:

During treatment, lower layers of wine-red and brownish-black leather were revealed on the outside and inside surfaces of the boards, respectively.

Front outer cover

The wine-red leather is soiled and discolored in areas. Remnants of the fibrous inner surface of the leather that covered it are adhered to its surface. Large horizontal scratches and abrasions cross the top and bottom third of the board. Vertically oriented areas of abrasion run along the fore-edge of the board and in an area about 10 cm wide adjacent to the fore-edge on the lower half of the board. Large splits exist in the leather on the upper and lower edges.

Back outer cover

The wine-red leather has been applied to the surface in two pieces. The bulk of the board is covered by one piece, the other piece is adhered in a strip about 2.5 cm wide down the side adjacent to the fore-edge flap. The leather is soiled and discolored in areas. Remnants of the fibrous inner surface of the leather that covered it are adhered to its surface. Large areas of abrasion are prominent in the upper part of the board; abrasion is also apparent along the side adjacent to the fore-edge flap and on the lower edge. The leather on the upper edge is abraded and about two-thirds of it is split.

Fore-edge flap outer cover

Only two small pieces of the wine-red leather survive on the fore-edge flap. Otherwise, the surface of the cardboard core of the board is exposed.

Envelope flap outer cover

No traces of the wine-red leather survive on this face of the flap and the raw surface of the cardboard core of the board is entirely exposed. However, the turn-ins of this leather on the doublure of the flap confirm that the outer face of the flap was once covered with this leather.

Front doublure

The brownish-black leather constituting the innermost layer of the doublure is hard and dry and has many cracks in its surface. It is soiled and has sustained several large losses along the edge nearest the spine and the lower fore-edge corner.

Back doublure

The brownish-black leather constituting the innermost layer of the doublure is hard and dry and has many cracks in its surface. It is soiled and severely abraded, skinned, gouged and scratched. Large areas of loss are apparent near the center of the board and along the vertical edges.

Fore-edge flap doublure

The surface of the brownish-black leather on the fore-edge flap doublure is cracked and soiled. An approximately rectangular loss of this leather, about 3 cm long, has been sustained at one end of the flap.

Envelope flap doublure

Visible areas of the brownish-black leather are soiled and cracked. Soiling and adhesive residues are present on the turn-ins of wine-red leather and the textile remnants on the flap.

Textblock

Support

Some overall browning of the paper is apparent with such discoloration more evident at the top, bottom and gutter edges. Soiling is heaviest in the lower fore-edge corners where the pages were handled during turning. Full-page illuminations, by virtue of their more vulnerable position near the front and back of the manuscript and their having been the focus of more handling, are severely damaged. Their outer edges are torn and have many losses, both small and large. They have been repaired repeatedly in the past. Some of these repairs are inappropriately heavy and have failed, thus causing more damage to the support. This damage is also visible on the leaves immediately following the illuminations at the front of the manuscript and on the leaves immediately preceding the illuminations at the back. Some mold staining can be seen on leaves at the front of the manuscript in the upper corner near the gutter. Most of the leaves have old repairs and guards along their fold-lines. Because the sewing and endband anchoring threads have broken or been pulled through the paper, many of the bifolios are torn along their fold-lines or are entirely separated. The gatherings are all detached where the spine has been pulled away from the textblock. Since the leaves in the bulk of the manuscript are largely detached and not aligned with each other, their edges are vulnerable to damage and many have been crushed, folded or creased.

Media

Browning of the paper support is evident behind the green marks in the text and green areas in the illuminations, damage characteristic of a copper-containing paint or ink. Areas of the illuminations covered with leaf gold show a peculiar cracking and lifting that may have been caused by the binder with which the gold was adhered. Illuminated areas show considerable mechanical damage from abrasion, staining and soiling, however, the paints and ink are stable.

TREATMENT PROPOSAL:

1. Remove the binding.
2. Clean the leather of the outer covers.
3. Re-adhere delaminating areas of the boards.
4. Fill losses and repair the tears in the leather.

5. Remove the former spine lining.
6. Remove the acidic wood pulp paper on the doublures and replace this with Japanese paper, if necessary.
7. Dryclean the textblock.
8. Treat moldy areas of the support with a water/alcohol mixture.
9. Remove damaging and failed repairs in the textblock.
10. Repair tears and breaks in the paper of the textblock.
11. Fill losses in the textblock with toned paper.
12. Cover stable but distracting old repairs with toned remoistenable tissue to make them less aesthetically unattractive.
13. Guard together detached leaves that once constituted bifolios.
14. Reassemble the leaves into gatherings.
15. Line the textblock using the textile it had been lined with previously.
16. Re-sew the textblock.
17. Sew new endbands to the textblock.
18. Add a new guard leaf to the front of the manuscript.
19. Reattach the textblock to the binding.

ADDENDUM:

During treatment, the discovery during of earlier bindings below the present binding led to the revision of the treatment proposal, as follows:

1. Remove the binding.
2. Remove the outermost covering of brownish-black leather from the boards.
3. Re-adhere delaminating areas of the boards.
4. Clean the outermost leather covering.
5. Fill losses and repair tears in this leather, maintaining the binding's form so that it can be slipped back over the boards but without adhesion to them. This will give scholars access to earlier binding material but effectively preserve the manuscript's pre-treatment appearance. The use of the outermost binding as a slip-cover also reduces the risk of this binding being separated from the manuscript and lost.
6. Clean the wine-red leather covering.
7. Fill losses and repair tears to the wine-red leather covering.
8. Remove the layers of paper on the board doublures to show the earliest brownish-black leather layer, leaving only wine-red leather turn-ins on the doublures and the textile remnants on the envelope flap doublure.
9. Clean the brownish-black leather on the doublures.
10. Fill losses in the brownish-black leather on the doublures.
11. Treat moldy areas of the support with a water/alcohol mixture.
12. Remove damaging and failed repairs in the textblock.
13. Repair tears and breaks in the paper of the textblock.
14. Fill losses in the textblock with toned paper.
15. Cover stable but distracting old repairs with toned remoistenable tissue to make them less aesthetically unattractive.
16. Guard together detached leaves that once constituted bifolios.
17. Reassemble the leaves into gatherings.

18. Line the textblock using the textile it had been lined with previously.
19. Re-sew the textblock.
20. Sew new endbands to the textblock.
21. Add a new guard leaf to the front of the manuscript.
22. Reattach the boards to the textblock maintaining their present orientation, with the wine-red leather on the outside and the earliest layer of brownish-black leather on the inside.
23. Create a new spine of vegetable-tanned goat leather dyed to match the wine-red leather on the boards.
24. Reattach the textile that had been used to cover the fore-edge flap doublure and adjacent joints.
25. Slip the manuscript back into its outermost, now-detachable, brownish-black leather binding.

AUTHORIZATION:

Museum Authority:

Title:

Date:

Signature: