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## The Read Muraqqa' Albums: Disbound Persian and Indian Album Leaves at the Morgan Library & Museum

### INTRODUCTION

The Morgan Library & Museum holds a collection of 57 Persian and Indian leaves acquired by J. Pierpont Morgan from Charles Hercules Read in 1911. These are known as the Read Album Leaves. This collection consists of disbound album leaves that are mostly double-sided, depicting miniature paintings, drawings, and calligraphy that date between the early 16th century and the late 19th century. After acquisition, the leaves were divided into two groups based on style: one Persian (M.386.1-21) and the other Indian (M.458.1-36). Most of these leaves were once bound in muraqqa'-style albums and likely would have been presented as paired openings, two miniature paintings followed by two calligraphies, surrounded by decorative rulings and borders often matching in design or theme. Although the albums were disbound prior to acquisition by Mr. Morgan, many of the leaves have the remnants of cloth hinges attached to either the inner spine edge, suggesting a past codex binding, or remnants along both long edges, indicative of a past accordion-style binding.

The collection has not undergone thorough conservation examination as a group in recent times, although individual leaves are actively used for display, exhibition, and loan. The leaves are frequently requested for viewing by researchers and scholars and are regularly used for teaching. These uses often require access to both sides of the leaf. To make informed decisions about the treatment and rehousing of the collection, it is important to first understand how the leaves are made, how they relate to other leaves in and outside the collection, and how the leaves have been treated in the past. These elements will be discussed in this article to demonstrate both the complex structure and history of the collection. The article will also describe the condition and housing survey undertaken, the findings of the survey, and the subsequent treatment and rehousing of the collection.

### BACKGROUND

#### *Muraqqa'*

*Muraqqa'* is a Persian word meaning “patched” or “patchwork” and relates to the garments of the Dervish members of the Sufi religion. The Dervish took vows of material poverty and would therefore wear garments that were patched and mended over time then passed onto other members (Thackston 2001; Roxburgh 2005, 188). *Muraqqa'* adequately describes the nature of both the construction and use of these albums. For example, leaves within an album are pieced together with many layers of paper, and an album often includes paintings, drawings, and calligraphy spanning many years, decades, and even centuries apart. Like the Dervish garments, *muraqqa'* were passed on to new owners such as family members.

Persian albums appear from the early 15th century in Timurid Herat and developed further during the 16th century in Safavid courts, spreading from Iran to India, Central Asia, and Turkey. Early albums were created in workshops and commissioned by emperors and courts. These albums were luxury objects that detailed events, history, and rulers of the time. They were used for intimate viewings, treasured and passed down within royal families, and often reformatted as ownership changed. However, by the late 16th century, albums were created and used for a wider audience and were no longer exclusive to royal courts.

*Muraqqa'* sprung from the production and distribution of religious and historical manuscripts incorporating imagery alongside text. Early albums were created using older specimens, as well as new ones, and by the turn of the 16th century, paintings, drawings, and calligraphy were produced specifically for albums (Hyden and Roxburgh 2018). Album pages were created to easily separate for the purpose of reformatting, reassembling, and adding more leaves as ownership changed. This inherent quality led to the disbinding of *muraqqa'* and the separating and splitting of leaves from the 18th century through to the 20th century by art dealers and Western owners.<sup>1</sup> Subsequently, this practice has resulted in dispersed *muraqqa'* leaves around the world (Roxburgh 2005).

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### *The Read Album Leaves*

Belle da Costa Greene played an integral role in securing acquisition of the leaves from Read. Greene was Mr. Morgan's personal librarian at the time of purchase of the leaves and was the first director of the Pierpont Morgan Library from 1924 to 1948. Correspondence between Greene and Read shows Greene's enthusiasm for acquiring the leaves as she writes to Read, "[I]t is very necessary for him (Mr. Morgan) to have a representation of this most important school, and I doubt if he would ever be able to find finer specimens" (Greene 1911). The Morgan collections are predominately of the Western tradition, and the Read Albums are one of only two collections of muraqqa' album leaves among the holdings; the second collection (MS M.848 and MS M.849) are a bequest from Greene.

### *Schmitz Study*

The provenance of the Read Album Leaves has been surmised and changed over time.<sup>2</sup> The most recent study was undertaken by Barbara Schmitz in 1997. Although the leaves are accessioned by two groups, distinguished simply by "Persian" and "Indian," Schmitz's study concludes that the collection is derived from at least four separate albums.

The first album consists of 20 Persian leaves and 7 Indian leaves that belong to an accordion-style album containing specimens likely first collated during the 1580s in Herat, Afghanistan. Leaves of the group indicate that the album was added to and reformatted in Golconda, Deccan India. The second and third albums contain 20 Indian leaves that were bound in codex format and are speculated to be from a group of 60 leaves previously owned by Read (the other 40 leaves were sold upon Read's death in 1928). Many of these leaves have matching decorated frames and specimens that detail royals and events from the Mughal Dynasty. Nonoriginal paginations in Arabic and English indicate that these leaves were once a part of two larger separate albums. The fourth group of leaves are miscellaneous: 1 Persian and 9 Indian leaves that vary in size and format. Schmitz believes that this group may have been acquired from the New York art collector Vladimir Simkhovitch in 1913. The addition of this fourth group creates 57 leaves in total, and although the last group has dissimilar provenance, the collection is known as the Read Album Leaves.

### FEATURES OF THE READ ALBUM LEAVES

There has been a long history of Western misunderstanding of muraqqa' leaves. This is potentially derived from the Western attitude that Persian albums were merely randomly composed collections, which ultimately played a large role in the practice of removing leaves and separating pages with little consideration (Roxburgh 2005). Many features of the Read Album Leaves, such as format and size, ownership

and artistic attribution, calligraphic fragments, and decorative frames, can help us understand how the leaves connect as groups. Nonoriginal features such as wormhole damage, evidence of reformatting, and inscriptions and pagination can help us piece together the album's history.

### *Format and Size*

An obvious distinction among the majority of the leaves is their format and size. For example, leaves of the accordion album are smaller in size ( $378 \times 241 \text{ mm} \pm 3 \text{ mm}$ ), and they have hinge remnants along both long edges with centered specimens. The codex leaves are slightly larger ( $414 \times 300 \text{ mm} \pm 5 \text{ mm}$ ) and have hinge remnants on the spine edge only, and the specimens are mounted slightly off center to create visual symmetry when the album is open. Figure 1 shows an example of a leaf from the accordion album on the left and a leaf from the codex album on the right.

### *Ownership and Artistic Attribution*

Many leaves belonging to the accordion album have been attributed to Herat in Afghanistan, and the dedication on leaf MS M.386.3r connects the album to both ownership and place. The dedication reads, "In the library of his excellency (whose) watchword is justice Husain Khan Shamul, the Governor of Herat." Husain Khan Shamul was appointed as governor in 1598 and was arguably the most powerful man in Persia for the following two decades. He was a known patron of the arts, as was his son Hasan Khan, who likely would have inherited the album.

Below the dedication to Husain is a second inscription, "the painter Muhammad Mu'min' a native Herat artist." Although this miniature is suspected to be a copy, another leaf in the group, MS M. 386.5, has been attributed to the artist's hand (Schmitz 1997, 125). Other miniatures within the group have been attributed to artists working in Persia during Husain and Hasan's time. Furthermore, 16 leaves of this group have eight signatures of Persian calligraphers. Dedications and signatures like this help attribute leaves to album origins.

### *Calligraphic Fragments*

Many leaves of the accordion album have been framed with calligraphic fragments on the inner border, around the centerpiece. This technique was known to be common in Persia and Turkey during the 16th century and later used in India during the 17th century (Schmitz 1997, 112). Translation of calligraphy fragments reveal that the leaves are connected in a literary sense, something that has been overlooked by Western owners in the past. Wheeler Thackston translated the poetry and prose within the Read Album Leaves collection in the 1990s and found that many of the calligraphy fragments adhered to inner borders across separate leaves had been cut from the same older manuscript. For



Fig. 1. Example of a leaf from the accordion style album shown on the left (MS M.386.11r) and an example of a leaf from a codex style album on the right (MS M.458.12r). Credit: Graham S. Harber, edited by Yvonne Hearn.

example, eight leaves in the accordion album were found to have snippets of prose cut from the manuscript *Munajat* by Ansari and pasted to inner borders surrounding the specimens. Figure 2 shows a photomicrograph of a calligraphy fragment adhered to the inner border that is lifting at the lower right edge.

#### Decorative Frames

There are a variety of decorative frames in the collection and the techniques used to create frames can help determine location and time of manufacture. The gold-sprinkled paper shown on the left of figure 3 is a technique common to both Persian and Indian manuscripts in the 16th and 17th century. The technique involves coating the paper with size and sprinkling flecks of leaf homogeneously over the surface (Wright et al. 2008, 200).

The frame shown in the center of figure 3 (details of the leaf shown on the left of figure 1) is a combination of gold-sprinkled paper and *découpage*, a paper-cutting technique

first used in the Persian book arts during the 15th century (Roxburgh 2005, 67–68). A lemon-shaped cartouche is shown in detail at the upper center of figure 3, and a bar-shaped cartouche is shown in detail at the lower center of figure 3. These shapes have been cut out of a light blue gold-sprinkled paper. A cream-colored paper has been pasted below the lemon-shaped cut-out that is decorated with gold and silver paint depicting playing monkeys (shown in the upper center cartouche). A darker blue paper has been pasted below the bar-shaped cut-out depicting a golden painted bear prowling (shown in the lower center cartouche). Schmitz has more specifically attributed this framing style to Herat during the 1580s, connecting the practice to the reign of Ali Quli Khan Shamlu, who was Husain Khan's father (Schmitz 1997, 116).

Four leaves in the collection have marbled paper frames. The process involves floating colorant in a vat of solution that is then transferred to paper. This decorative technique was used by Persian artists from the late 15th century (Bloom



Fig. 2. Photomicrograph of a calligraphy fragment adhered to the inner border and lifting at the right side (MS M.386.12r).

2001, 72). The marbled borders shown on the right side of figure 3 are of a combed style that were prevalent in Golconda, in the Deccan region of India, during the first half of the 17th century (Schmitz 1997, 113).

Other frames in the collection are pictorial and figural, which can help determine pairings of leaves and reveal

insight to cultural inspiration. For example, there are leaves with Chinese-inspired lotus frames, landscape scenes of royal Mughal events such as performances and hunting scenes, and frames that are highly detailed with a geometric illumination such as the leaf shown on the right of figure 1. This style of framing is generally reserved for an album frontispiece or



Fig. 3. Example of decorative frames: gold-sprinkled paper (left), gold-sprinkled paper with lemon shaped (upper center), and bar-shaped (lower center) découpage and marbled paper (right). Credit: Graham S. Harber, edited by Yvonne Hearn.

finispiece, which then gives insight to the orientation of such leaves within an album.

#### *Wormhole Damage*

The wormhole damage of the collection has been assessed.<sup>3</sup> There are 27 leaves showing evidence of this type of insect activity, and many of these leaves share connecting patterns of loss. When the leaves are arranged by order of wormhole damage, they are not found to be sequential, indicating that the damage likely occurred when the leaves were not bound but rather stacked randomly. Two leaves in a private New York collection were discovered to share the same distinct wormhole losses as those among the Read Albums, and this has served as a connecting nonoriginal feature (Schmitz 1997, 111). One can imagine that these leaves were stored away, perhaps with leaves currently in other collections, after the album was disbound and awaiting reformatting.

#### *Evidence of Reformatting*

Evidence of reformatting can be seen among some leaves in the collection. For example, the leaf MS M.386.5 has specimens on the recto and verso attributed to Herat during the late 16th century; however, the marbled frames on the verso are likely connected to Golconda in the 17th century. This suggests that the leaves were possibly reformatted at this time and place.

Leaves MS M.386.18 and MS M.386.21 have been split and reveal many matching torn paper layers and patterns when comparing their split sides. It is possible that they were once originally the recto and verso of the same leaf. A specimen has been removed from leaf MS M.458.35r, and in its place is a label added by a European owner stating “Specimens of Persian Writings & Some as Copies.” Although these leaves show damage due to past intervention, they are relatively intact and stable, which speaks to both the extreme treatment and endurance of disbound *muraqqa’* leaves over time.

#### *Inscriptions and Pagination*

Added inscriptions such as seals and pagination have helped scholars trace leaves to albums. One leaf, MS M.458.11, shows a small oval seal of a Japanese collector named Miwa on the recto. On the verso of this leaf, there is a seal of a Persian owner, Fazl ‘Ali (1794–1795), as well as an inscription written by an English owner. This demonstrates multiple possessors from different cultures and time. Leaves with Western and Arabic paginations from the codex albums have helped scholars connect them to 18 other leaves in various North American and international institutions. Western paginations added to these leaves do not necessarily fit the speculated order or orientation of the original albums (Schmitz 1997, 118) and therefore are a reminder of Western misunderstanding or misinterpretation of *muraqqa’*.

It is important to acknowledge both the original and non-original features in which the leaves present. This helps to

better understand the leaves for what they once were and what they are today while giving insight to their history and treatment between being bound and dispersed.

#### CONDITION AND HOUSING SURVEY

A Microsoft Access survey was specifically created for the Read Album Leaves as a way to efficiently collect and record data while quantifying findings to serve the collection.

#### *Condition Findings*

Data collected included the condition assessment of both the primary support (the centerpiece or specimen) and the secondary supports (the inner borders and frames). The condition of paper components and media were examined under a microscope. It was found that many leaves had media cracking and/or friability that was particularly common in leaves painted with heavy pigments. Some leaves had areas of loss to primary and secondary supports that were fragile and vulnerable to further damage. These types of losses could be related to paper separation or lifting, moisture, and/or insect damage. Secondary supports were often problematic due to their complex layering. For example, there was evidence of paper delamination, often visible at the corners of the leaf. Many leaves had numerous areas of lifting paper components: at the joints or overlap of inner borders, central specimens, and around calligraphy fragments. Examples of some damage described are shown in figure 4.

In summary, the survey found that 15 leaves are in poor condition and require immediate treatment, 36 leaves are in fair and stable condition, and 6 leaves are in good and stable condition requiring no treatment. The 36 leaves, although in fair condition, would benefit from some minor treatment.

#### *Housing Findings*

The housing of the collection was assessed for overall condition, hinge function, and materials used. All 57 leaves are housed in archival mats stored inside solander boxes. However, there are many matting inconsistencies observed throughout the collection. For example, many of the leaves are currently housed in mats created during a rehousing project undertaken in the late 1960s. These mats are flimsy and no longer structurally sound. Some have failing linen tape on adjoining boards, and in very few cases there is evidence of media offset or transfer (that may have occurred due to the slightly coarse texture of the mat board). This board is no longer a material used by Thaw Conservation Center preparators.

Some leaves are matted with “semisecure” hinges. These hinges are categorized as semisecure because they do not secure the leaf entirely and allow the leaf to be removed from the mat. Examples of semisecure hinges are shown in figure 5. Examples include paper corners, mat board clamps



Fig. 4. Example of some damage: delaminating paper layers (left), lifting specimen (center), and insect damages and loss (right).

(made with mat board pieces and linen tape that clamp the leaf to the backboard and require a sliding action for removal), and Mylar clips (that clamp the leaf at all edges). All of these systems enable access to the verso of the leaf by fully removing the leaf from the mat. Although this creates free access to the verso of the leaf, it also creates risk of damage to the leaf via excessive handling. The mats' purpose is to support and protect the leaf, so removing the leaf from the mat eliminates this safeguard. Furthermore, some leaves showed damage directly related to semisecure hinges, such as breaking, cracking, tearing, and scuffing at the corners of leaves in close proximity to these hinges. This damage indicates that semisecure hinges are not safely supporting the leaf inside the mat.

Some leaves are v-hinged with gummed linen tape, a material no longer used for this purpose by Thaw

Conservation Center conservators, and Japanese paper. Locations of these hinges vary—some leaves are hinged along the upper edge of the leaf, and some leaves are floated—creating access difficulties when attempting to view the verso.

In summary, the survey found that 39 leaves are housed in older-style mats from the late 1960s, and 18 leaves are currently housed in new mats or a combination of new and old (i.e., a new window and old backboard). There are currently 20 leaves that are supported by semisecured hinges such as paper corners, mat board clamps, and Mylar clips. Of the remaining 37 leaves, 31 are v-hinged with gummed linen tape and 6 with Japanese paper. Most of the v-hinges are attached to leaves along the left side enabling a Western-style turn, except for 14 leaves that are currently v-hinged along the upper edge of the leaf.



Fig. 5. Example of semisecured hinges: paper corners (left), linen tape and mat board pieces (center), and Mylar clips (right).

## TREATMENT AND REHOUSING

The findings from the survey were used to present the overall state of the collection to conservators and curators. Leaves in poor condition were flagged and made unavailable until they could be treated. Data was quantified to assess the amount of work, time, and associated costs for treating and rehousing the collection.

### *Treatment*

Treatment of the 15 leaves in poor condition was prioritized to redeem access to the leaves. Many of these leaves had friable, cracking, and lifting pigments that required consolidation. This was executed under a microscope using a solution of 1.5% w/v isinglass in deionized water, applied locally with a fine brush. This consolidant was chosen for its high adhesive qualities at a low percentage, coupled with its matte and virtually undetectable drying finish. Areas of paper lifting, damage, and tears were stabilized and repaired using wheat starch paste and a variety of lightweight Japanese papers to strengthen weak areas. Methods of removing linen tape hinges were tested. Successful techniques included the use of a 5% w/v agarose gel in deionized water that proved effective for hinges placed on durable surfaces like original or near original cloth hinges. On more sensitive surfaces such as paper with previously skinned areas, or paper that was soft, dirty, and prone to tide lines, the hinges were slowly and carefully moistened with deionized water using a cotton swab. After the adhesive was softened using either method, the carrier and residue could be removed or reduced mechanically with a spatula. After removing hinges, a solution of 1% w/v methylcellulose in deionized water was applied locally with a brush to damaged or skinned areas to strengthen the surface.

### *Housing Research and Considerations*

Determining appropriate housing for the muraqqa' leaves involved outreach to conservators from other institutions housing similar material to explore processes already in place. A variety of mock-up mats were constructed as a way of testing potential designs, including a double-window mat that displayed both sides of the leaves. However, due to the complex structure and weight of the leaves, mock-up mats designed to display both sides or have removable hinging systems were not feasible or safe. After many conversations and discussions among conservators and curators, it was decided that the housing approach would not detour far from the previous mat style. The assessment of the housing indicated that the most problematic factors are failing older materials and inconsistency of new materials. Therefore, it was clear that the collection would benefit immensely from a new standard mat style that met the functional needs for the collection.

### *New Housing*

An example of the mat style chosen is shown in figure 6 with the following specifications:

- Standard size overthrow window mat with an eight-ply window and four-ply backboard. The eight-ply window provides strength and rigidity to the overall package, ensuring that the leaves do not flex when handled, whereas the depth of window caters to the undulations evident in many of the leaves.
- The leaf is hinged securely on the left side for a Western-style turn following the same direction as the window turn.
- Hinges are made of Japanese paper of an appropriate weight and sympathetic appearance to the leaf in color and surface finish.



Fig. 6. Example of the mat style chosen for the Read Album Leaves. Opening the window (left) and the leaf turned (right).



- Interleaving is placed between the recto and window, and the verso and backboard (the latter is a preventive measure for future media transfer or offset to the backboard).
- Two small paper corners are attached to the backboard to secure the leaf on the right edge. This will relieve tension from the hinges when the mat is placed upright and is a measure to secure all corners.

This style of mat does create limited access to the verso of the leaf (i.e., the mat has to be opened and the leaf turned to view the verso). However, this method safely supports the leaf, whereas the turning action somewhat resembles the way in which these leaves were once viewed. Before rematting, each leaf will be individually discussed with curators to assess the display side of the leaf in accordance with where hinging can safely be applied. This discussion and review process aims to minimize the need for future rehinging of the leaves. Finally, these matting specifications and handling guidelines have been made available to the Morgan Library & Museum's collection staff.

#### CONCLUSION

Surveying the collection as a group has allowed conservators to revise condition and housing, which in turn ensures safe future use and preservation. Although the mat style chosen only displays one side of the leaf, it is hoped that this article demonstrates the reasoning behind this conservation decision. This decision is based on the complexity of the leaves, their inherently compromised construction and nature, and their history before and after entering the Morgan collection. As the Schmitz study aims to describe and catalog the Read Album Leaves as a group, likewise this project aims to conserve the leaves as a group. Although the Read Album Leaves are no longer bound physically, it is hoped that understanding the leaves collectively will keep them united to one another and also to those dispersed around the world.

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#### NOTES

1. Georges Demotte was a French dealer known to have split the *Late Shah Jahan Album* (ca. 1650–1658), then remounted the split leaves with paper or card before selling to increase profit (Wright et al. 2008, 107). Another known European art dealer, F. R. Martin, extracted leaves from albums at the Topkapi Palace in Istanbul, which are now dispersed in Western collections, and Heinrich Friedrich von Diez (1751–1817), a German diplomat and orientalist, sourced leaves from the Ottoman palace, which he later bound into an album in Berlin (Roxburgh 2005, 15).
2. Miniatures of the Persian accordion album have been attributed to Persia, Bukhara, and Turkey at various times (Schmitz 1997, 114).
3. Prior to the Schmitz study, in the late 1960s William Voelkle, then curator of Manuscripts at the Morgan Library & Museum, assessed the wormhole damage of leaves within this group. Voelkle also made the connection between leaves owned by a private New York collector (Schmitz 1997, 111).

#### REFERENCES

- Bloom, Jonathan. 2001. *Paper Before Print: The History and Impact of Paper in the Islamic World*. New Haven, CT: Yale University Press.
- Greene, Belle da Costa. 1911. Letter to Charles Hercules Read, June 1. Morgan Library & Museum.
- Hyden, Hannah, and J. Roxburgh. 2018. *Preserved Pages: Book as Art in Persia and India, 1300–1800*. Auburn, MA: Miles Press.
- Roxburgh, David J. 2005. *The Persian Album 1400–1600, From Dispersal to Collection*. New Haven, CT: Yale University Press.
- Schmitz, Barbara. 1997. *Islamic and Indian Manuscripts and Paintings at the Pierpont Morgan Library*. New York: Pierpont Morgan Library.
- Thackston, Wheeler M. 2001. *Album Prefaces and Other Documents on the History of Calligraphers and Painters*. Leiden, Netherlands: Brill.
- Wright, Elaine, Susan Stronge, Wheeler M. Thackston, Steven Cohen, Charles Horton, Rachel Smith, and Jessica Baldwin. 2008. *Muraqqa' Imperial Mughal Albums from the Chester Beatty Library Dublin*. Alexandria, VA: Art Services International.

#### FURTHER READING

- Hearn, Yvonne M. 2020. Materials and decorative techniques of the Read Album Leaves. *Thaw Conservation Center Blog*. <https://www.themorgan.org/blog/materials-and-decorative-techniques-read-album-leaves>.

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